STIC Search Report
EIC 1700

STIC Database Tracking Number: 129543

TO: Ben Sackey
Location: REM 5B31
Art Unit : 1626
August 16, 2004

Case Serial Number: 10/619044

From: Kathleen Fuller
Location: EIC 1700
REMSEN 4B28
Phone: 571/272-2505
Kathleen.Fuller@uspto.gov

Search Notes

Access DB# [illegible]

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: BEN SACKEY Examiner #: 73489 Date: 8/10/04
Art Unit: 1626 Phone Number ~~30~~ 2-0704 Serial Number: 10/618,044
Mail Box and Bldg/Room Location: REM 5B31 Results Format Preferred (circle): ~~PAPER~~ DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

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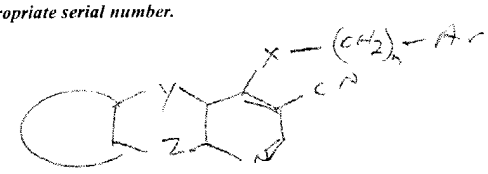
Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: TRICYCLIC PROTEIN KINASE INHIBITORS

Inventors (please provide full names): DAN M. BERGER ET AL.

Earliest Priority Filing Date: 12/29/99

For Sequence Searches Only *Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*



Ar is phenyl which is optionally substituted

Y and Z each Carbon

X is NH

Elected Species is:
8-(Chloro-5-methoxy-2-methylanilino)-3-[2-(4-morpholinyl)ethyl]-3H-imidazo[4,5-g]quinoline-7-carbonitrile

****

STAFF USE ONLY

Searcher: K. Fuller
Searcher Phone #:
Searcher Location:
Date Searcher Picked Up:
Date Completed: 8/16/04
Searcher Prep & Review Time: 30
Clerical Prep Time:
Online Time: 20

Type of Search

NA Sequence (#)
AA Sequence (#)
Structure (#) 1
Bibliographic
Litigation
Fulltext
Patent Family
Other

Vendors and cost where applicable

STN ✓
Dialog
Questel/Orbit
Dr.Link
Lexis/Nexis
Sequence Systems
WWW/Internet
Other (specify)

=> FILE REG
FILE 'REGISTRY' ENTERED AT 17:35:53 ON 16 AUG 2004

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 15 AUG 2004 HIGHEST RN 727358-71-6
DICTIONARY FILE UPDATES: 15 AUG 2004 HIGHEST RN 727358-71-6

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

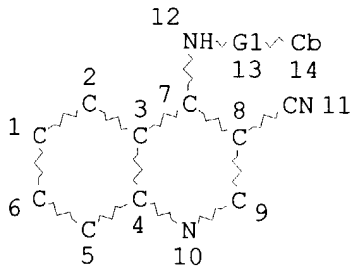
Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=> FILE HCAPLUS
FILE 'HCAPLUS' ENTERED AT 17:35:57 ON 16 AUG 2004

FILE COVERS 1907 - 16 Aug 2004 VOL 141 ISS 8
FILE LAST UPDATED: 15 Aug 2004 (20040815/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> D QUE
L4 STR



REP G1=(0-4) CH2
NODE ATTRIBUTES:
CONNECT IS E3 R AT 1
CONNECT IS E3 R AT 6
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE
L6 122 SEA FILE=REGISTRY SSS FUL L4
L7 14 SEA FILE=HCAPLUS ABB=ON L6

=> D L7 1-14 ALL HITSTR

L7 ANSWER 1 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:182368 HCAPLUS
DN 140:229401
ED Entered STN: 05 Mar 2004
TI Three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands
IN Come, Jon H.; Becker, Frank; Kley, Nikolai A.; Reichel, Christoph
PA USA
SO U.S. Pat. Appl. Publ., 238 pp., Cont.-in-part of U.S. Ser. No. 91,177.
CODEN: USXXCO
DT Patent
LA English
IC ICM C12Q001-68
ICS G01N033-53; C07H021-04
NCL 435006000; 435007100; 536023100; 530350000; 552653000; 552500000; 536123000; 546001000; 540200000; 530317000
CC 1-1 (Pharmacology)
Section cross-reference(s): 9, 28
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004043388	A1	20040304	US 2002-234985	20020903
	US 2003165873	A1	20030904	US 2002-91177	20020304
PRAI	US 2001-272932P	P	20010302		
	US 2001-278233P	P	20010323		
	US 2001-329437P	P	20011015		
	US 2002-91177	A2	20020304		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2004043388	ICM	C12Q001-68
	ICS	G01N033-53; C07H021-04
	NCL	435006000; 435007100; 536023100; 530350000; 552653000; 552500000; 536123000; 546001000; 540200000; 530317000
US 2004043388	ECLA	C07D231/54; C07D487/04; C07F009/6558B; C07F009/6561; G01N033/68A10

AB The invention provides compns. and methods for isolating ligand-binding polypeptides for a user-specified ligand, and for isolating small mol. ligands for a user-specified target polypeptide using an improved class of hybrid ligand compds. Preparation of compds., e.g a methotrexate moiety linked by a polyethylene gycol moiety to dexamethasone, is described.

ST three hybrid assay system ligand polypeptide; methotrexate dexamethasone conjugate prepn three hybrid assay system

IT Proteins
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(55,000-mol.-weight; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Gene, microbial
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ADE2, reporter gene; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Gene, microbial
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(CAN1, reporter gene; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Peptides, biological studies
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(CBD tag; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Gene, microbial
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(CYH1, reporter gene; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Cyclins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(D1; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT DNA
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(DNA binding domain; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Peptides, biological studies
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(E tag; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Cyclins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(E; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Immunophilins
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL

(Biological study); USES (Uses)
(FKBP-12 (FK 506-binding protein, 12 kDa), fusion protein including domain of; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Transcription factors
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(GAL4; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Proteins
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(GyrB, fusion protein including domain of; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Proteins
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(H-1; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Gene, microbial
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(HIS3, reporter gene; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Gene, microbial
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(LEU2, reporter gene; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Gene, microbial
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(LYS2, reporter gene; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Proteins
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(MBP (maltose-binding protein), fusion protein including domain of; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Peptides, biological studies
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Myc tag; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Proteins
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(PLV, conjugates; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Peptides, biological studies
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(S tag; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Peptides, biological studies
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(T7 tag; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Gene, microbial
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(TRP1, reporter gene; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Gene, microbial
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(TRP2, reporter gene; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Peptides, biological studies
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Tag 100; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Proteins
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Tet-R, fusion protein including domain of; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Proteins
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(URA3, conjugates; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Gene, microbial
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(URA3, reporter gene; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Peptides, biological studies
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(V5 tag; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Peptides, biological studies
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(VSV tag; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Peptides, biological studies
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Xpress tag; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Transcriptional regulation
(activation, transcriptional activation domain; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Genomic library
(bacterial or eukaryotic genomic DNA fragment library; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Peptides, biological studies
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(calmodulin binding peptide tag; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Gene, microbial
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cat, reporter gene; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Estrogens
Ligands
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(conjugated; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Acid halides
Alcohols, biological studies
Aldehydes, biological studies
Alkaloids, biological studies
Alkanes, biological studies
Alkenes, biological studies
Alkyl halides
Alkynes
Amides, biological studies
Amine oxides
Amines, biological studies
Amino acids, biological studies
Anhydrides
Aromatic hydrocarbons, biological studies
Aryl halides
Cannabinoids
Carboxylic acids, biological studies
Cyanohydrins
Enamines
Enzymes, biological studies
Esters, biological studies
Ethers, biological studies
Imines
Lipids, biological studies
Nitriles, biological studies
Nucleic acids
Nucleosides, biological studies
Nucleotides, biological studies
Organometallic compounds
Peptides, biological studies
Polysaccharides, biological studies
Prostaglandins
Proteins
Quaternary ammonium compounds, biological studies
Steroids, biological studies
Transcription factors
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(conjugates; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Sulfonic acids, biological studies
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(esters, conjugates; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Cell
(extract; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)
IT Proteins
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(fluorescent, conjugates; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)
IT Androgen receptors
Cannabinoid receptors
Estrogen receptors
Glucocorticoid receptors
Progesterone receptors
Retinoic acid receptors
Steroid receptors
Vitamin D receptors
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(fusion protein including domain of; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)
IT Gene, microbial
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gfp, reporter gene; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)
IT Proteins
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(green fluorescent, conjugates; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)
IT Analysis
(halo growth assay; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)
IT Aldehydes, biological studies
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hydroxy, conjugates; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)
IT Peptides, biological studies
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(intein/chitin binding domain tag; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)
IT Gene, microbial
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(lacZ, reporter gene; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)
IT Transcription factors
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(lactose repressors; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)
IT Oligonucleotides
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(library; three hybrid assay system for isolating ligand-binding

polypeptides and for isolating small mol. ligands)
IT Structure-activity relationship
(ligand-binding; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)
IT Proteins
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ligand-binding; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)
IT Microtiter plates
(microtiter plate growth assay; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)
IT Proteins
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(phi-29 terminal protein; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)
IT DNA formation factors
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(rep; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)
IT Hemagglutinins
Thioredoxins
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(tag; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)
IT Drug screening
Fluorometry
Immobilization, molecular or cellular
Linking agents
Molecular association
Protein motifs
Surface plasmon resonance
cDNA library
(three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)
IT Chimeric gene
Fusion proteins (chimeric proteins)
Glycoconjugates
Polynucleotides
Reporter gene
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)
IT Lactams
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(β-, antibiotics, conjugates; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)
IT Antibiotics
(β-lactam, conjugates; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)
IT 9002-03-3, Dihydrofolate reductase 9073-60-3, β-Lactamase
50812-37-8, Glutathione-S-transferase
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL

(Biological study); USES (Uses)
(fusion protein including domain of; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT 9002-88-4, Polyethylene
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(linker; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT 60267-61-0, Ubiquitin
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(subdomain; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT 9031-44-1, Kinase 109136-49-4, Ubiquitin-specific protease 141349-86-2, Cdk2 kinase 147014-97-9, Cdk4 kinase 150428-23-2, Cyclin-dependent kinase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT 454221-45-5P 454221-46-6P 454221-47-7P 454221-48-8P 666839-17-4P 668481-63-8P, GPC 285985
RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT 50-02-2D, Dexamethasone, conjugates 53-06-5D, Cortisone, conjugates 57-83-0D, Progesterone, conjugates, biological studies 58-22-0D, Testosterone, conjugates 58-85-5D, Biotin, conjugates 59-05-2D, Methotrexate, conjugates 60-54-8D, Tetracycline, conjugates 69-79-4D, Maltose, conjugates 70-18-8D, Glutathione, conjugates 108-95-2D, Phenol, conjugates 129-56-6D, Anthra[1,9-cd]pyrazol-6(2H)-one, conjugates 302-79-4D, Retinoic acid, conjugates 303-81-1D, Novobiocin, conjugates 446-72-0D, conjugates 938-55-6D, conjugates 1127-93-1D, 2,4-Diaminopteridine, conjugates 1406-16-2D, Vitamin D, conjugates 2365-40-4D, conjugates 3768-14-7D, conjugates 5812-07-7D, conjugates 7440-02-0D, Nickel, conjugates 7440-43-9D, Cadmium, organocadmium compound conjugates 16036-15-0D, conjugates 34708-97-9D, conjugates 52837-55-5D, conjugates 53123-88-9D, Rapamycin, conjugates 54714-78-2D, conjugates 56767-20-5D, conjugates 60868-76-0D, conjugates 64134-30-1, Hexahistidine 72873-74-6D, conjugates 75706-12-6D, conjugates 79217-60-0D, Cyclosporin, conjugates 88404-44-8D, conjugates 97620-17-2D, conjugates 98849-88-8 101622-51-9D, conjugates 103745-39-7D, conjugates 104987-11-3D, Fk506, conjugates 105628-72-6D, conjugates 106035-95-4D, conjugates 107761-24-0D, conjugates 108402-27-3D, conjugates 109511-58-2D, conjugates 109887-57-2D, conjugates 121405-24-1D, conjugates 125313-92-0D, conjugates 125314-64-9D, conjugates 127243-85-0D, conjugates 129758-26-5D, conjugates 133052-90-1D, conjugates 134036-52-5D, conjugates 135897-06-2D, conjugates 136194-77-9D, conjugates 137206-97-4D, conjugates 137658-62-9D, conjugates 142273-20-9D, conjugates 146535-22-0D, conjugates 152075-98-4D, conjugates 152121-47-6D, conjugates 152459-95-5D, conjugates 153436-54-5D, conjugates 154447-36-6D, conjugates 160335-45-5D, conjugates 165806-09-7D, conjugates 165806-48-4D, conjugates 165806-53-1D, conjugates 167869-21-8D, conjugates 169438-43-1D, conjugates 170032-58-3D, conjugates 171178-26-0D, conjugates 171178-54-4D, conjugates 171178-82-8D, conjugates 171178-83-9D, conjugates 171179-06-9D, conjugates 171745-04-3D, conjugates

172889-27-9D, conjugates 173458-56-5D, conjugates 174892-57-0D, conjugates 178909-27-8D, conjugates 179248-61-4D, conjugates 183321-74-6D, conjugates 183738-67-2D, conjugates 183738-70-7D, conjugates 183738-79-6D, conjugates 183738-90-1D, conjugates 183738-95-6D, conjugates 184475-35-2D, conjugates 184475-37-4D, conjugates 184475-43-2D, conjugates 184475-44-3D, conjugates 184475-45-4D, conjugates 184475-47-6D, conjugates 184475-48-7D, conjugates 184475-52-3D, conjugates 184475-54-5D, conjugates 185039-89-8D, conjugates 186611-14-3D, conjugates 186611-56-3D, conjugates 186692-46-6D, conjugates 187667-14-7D, conjugates 187667-18-1D, conjugates 187667-74-9D, conjugates 187667-77-2D, conjugates 187667-79-4D, conjugates 187667-82-9D, conjugates 187668-04-8D, conjugates 187668-06-0D, conjugates 187724-30-7D, conjugates 187724-64-7D, conjugates 188827-32-9D, conjugates 189018-86-8D, conjugates 189018-93-7D, conjugates 189747-51-1D, conjugates 190653-73-7D, conjugates 191728-43-5D, conjugates 192705-79-6D, conjugates 193220-02-9D, conjugates 193220-03-0D, conjugates 193827-64-4D, conjugates 194423-15-9D, conjugates 196504-68-4D, conjugates 196511-07-6D, conjugates 196964-11-1D, conjugates 197525-46-5D, conjugates 197525-48-7D, conjugates 198959-83-0D, conjugates 198959-99-8D, conjugates 198967-51-0D, conjugates 199986-75-9D, conjugates 200285-07-0D, conjugates 200719-53-5D, conjugates 202272-68-2D, conjugates 202272-72-8D, conjugates 202272-73-9D, conjugates 204005-46-9D, conjugates 205256-55-9D, conjugates 205376-30-3D, conjugates 207220-31-3D, conjugates 207220-32-4D, conjugates 207220-33-5D, conjugates 207220-34-6D, conjugates 207220-35-7D, conjugates 207220-36-8D, conjugates 207220-37-9D, conjugates 207220-38-0D, conjugates 208260-28-0D, conjugates 208260-29-1D, conjugates 209410-31-1D, conjugates 209410-46-8D, conjugates 209410-92-4D, conjugates 209412-01-1D, conjugates 211244-79-0D, conjugates 211245-14-6D, conjugates 211245-21-5D, conjugates 211245-83-9D, conjugates 211247-20-0D, conjugates 212141-54-3D, conjugates 212142-02-4D, conjugates 212628-43-8D, conjugates 212630-91-6D, conjugates 212844-54-7D, conjugates 213743-29-4D, conjugates 214485-56-0D, conjugates 214485-81-1D, conjugates 214486-70-1D, conjugates 214487-04-4D, conjugates 214697-26-4D, conjugates 214983-24-1D, conjugates 215306-39-1D, conjugates 215925-74-9D, conjugates 216572-95-1D, conjugates 216573-13-6D, conjugates 216573-24-9D, conjugates 216573-25-0D, conjugates 216573-26-1D, conjugates 216573-27-2D, conjugates 216573-32-9D, conjugates 216573-35-2D, conjugates 216573-36-3D, conjugates 216573-37-4D, conjugates 216573-57-8D, conjugates 216573-58-9D, conjugates 216573-59-0D, conjugates 216573-62-5D, conjugates 216573-65-8D, conjugates 216573-66-9D, conjugates 216573-67-0D, conjugates 216573-71-6D, conjugates 216573-73-8D, conjugates 216573-98-7D, conjugates 216574-01-5D, conjugates 216574-02-6D, conjugates 216574-03-7D, conjugates 216574-04-8D, conjugates 216574-05-9D, conjugates 216574-06-0D, conjugates 216574-07-1D, conjugates 216589-05-8D, conjugates 216699-96-6D, conjugates 216752-48-6D, conjugates 219580-11-7D, conjugates 219796-67-5D, conjugates 220654-17-1D, conjugates 220904-59-6D, conjugates 220904-61-0D, conjugates 220904-62-1D, conjugates 220904-65-4D, conjugates 220904-67-6D, conjugates 220904-79-0D, conjugates 220904-82-5D, conjugates 220904-83-6D, conjugates 221061-26-3D, conjugates 221061-42-3D, conjugates 221062-42-6D, conjugates 221243-82-9D, conjugates 221636-05-1D, conjugates 221875-32-7D, conjugates 222034-85-7D, conjugates 222034-86-8D, conjugates 222034-96-0D, conjugates 222034-99-3D, conjugates 222035-13-4D, conjugates 222035-15-6D,

conjugates 222035-16-7D, conjugates 222035-20-3D, conjugates 222035-22-5D, conjugates 222035-57-6D, conjugates 222035-58-7D, conjugates 222036-13-7D, conjugates 222036-17-1D, conjugates 222036-18-2D, conjugates 222957-57-5D, conjugates 223645-76-9D, conjugates 223725-07-3D, conjugates 223738-94-1D, conjugates 223784-60-9D, conjugates
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT 223784-70-1D, conjugates 223784-75-6D, conjugates 224435-00-1D, conjugates 224435-99-8D, conjugates 227622-92-6D, conjugates 227622-98-2D, conjugates 227623-09-8D, conjugates 228399-50-6D, conjugates 228400-93-9D, conjugates 228999-48-2D, conjugates 229000-80-0D, conjugates 229155-20-8D, conjugates 229155-47-9D, conjugates 234772-64-6D, conjugates 237430-03-4D, conjugates 240820-00-2D, conjugates 241494-77-9D, conjugates 241494-81-5D, conjugates 243836-51-3D, conjugates 244231-67-2D, conjugates 245036-16-2D, conjugates 247148-40-9D, conjugates 248270-51-1D, conjugates 249937-49-3D, conjugates 249937-52-8D, conjugates 250692-05-8D, conjugates 251106-46-4D, conjugates 251356-16-8D, conjugates 251356-18-0D, conjugates 252003-53-5D, conjugates 252894-30-7D, conjugates 252894-32-9D, conjugates 252916-29-3D, conjugates 254986-07-7D, conjugates 258282-55-2D, Pyrido[2,3-d]pyrimidin-7(1H)-one, conjugates 258502-99-7D, conjugates 258830-51-2D, conjugates 258831-13-9D, conjugates 260428-60-2D, conjugates 261507-52-2D, conjugates 262430-03-5D, conjugates 262432-51-9D, conjugates 262445-18-1D, conjugates 263149-48-0D, conjugates 263149-49-1D, conjugates 263149-95-7D, conjugates 263150-06-7D, conjugates 263150-07-8D, conjugates 263150-14-7D, conjugates 263150-30-7D, conjugates 263170-24-7D, conjugates 263170-85-0D, conjugates 263170-86-1D, conjugates 263170-87-2D, conjugates 263170-94-1D, conjugates 263170-95-2D, conjugates 263171-02-4D, conjugates 263171-04-6D, conjugates 263171-14-8D, conjugates 263171-19-3D, conjugates 263267-59-0D, conjugates 264136-79-0D, conjugates 265097-99-2D, conjugates 265098-00-8D, conjugates 265098-01-9D, conjugates 265098-02-0D, conjugates 265312-49-0D, conjugates 265312-50-3D, conjugates 265312-51-4D, conjugates 267429-89-0D, conjugates 267654-34-2D, conjugates 267885-28-9D, conjugates 267885-29-0D, conjugates 267885-30-3D, conjugates 267885-31-4D, conjugates 267885-32-5D, conjugates 267885-33-6D, conjugates 267885-34-7D, conjugates 267892-01-3D, conjugates 268559-59-7D, conjugates 269390-69-4D, conjugates 273727-89-2D, conjugates 273920-44-8D, conjugates 283602-39-1D, conjugates 284486-91-5D, conjugates 285125-84-0D, conjugates 285983-72-4D, conjugates 287177-30-4D, conjugates 287177-32-6D, conjugates 289711-40-6D, conjugates 294853-11-5D, conjugates 295327-39-8D, conjugates 295330-14-2D, conjugates 295799-47-2D, conjugates 297754-50-8D, conjugates 300715-91-7D, conjugates 300860-00-8D, conjugates 303195-98-4D, conjugates 303727-31-3D, conjugates 303740-80-9D, conjugates 304664-06-0D, conjugates 306998-03-8D, conjugates 307353-61-3D, conjugates 307353-99-7D, conjugates 309278-63-5D, conjugates 311780-08-2D, conjugates 311819-90-6D, conjugates 313345-15-2D, conjugates 313389-73-0D, conjugates 322681-26-5D, conjugates 322689-01-0D, conjugates 322689-07-6D, conjugates 325781-16-6D, conjugates 326894-84-2D, conjugates 329260-68-6D, conjugates 329260-78-8D, conjugates 329727-62-0D, conjugates 329727-65-3D, conjugates 331662-50-1D, conjugates 331662-51-2D, conjugates 331662-52-3D, conjugates

331662-69-2D, conjugates 331662-91-0D, conjugates 333726-41-3D, conjugates 342647-27-2D, conjugates 342647-29-4D, conjugates 343974-64-1D, conjugates 343974-94-7D, conjugates 343974-95-8D, conjugates 343974-96-9D, conjugates 344359-26-8D, conjugates **348617-19-6D**, conjugates 355013-01-3D, conjugates 359886-84-3D, conjugates 359888-77-0D, conjugates 360770-48-5D, conjugates 360770-49-6D, conjugates 360770-50-9D, conjugates 360770-51-0D, conjugates 360770-52-1D, conjugates 360770-53-2D, conjugates 360770-55-4D, conjugates 360770-56-5D, conjugates 364735-20-6D, conjugates 364788-37-4D, conjugates 367927-40-0D, conjugates 367927-41-1D, conjugates 367927-47-7D, conjugates 367927-50-2D, conjugates 372512-45-3D, conjugates 380425-05-8D, conjugates 380425-07-0D, conjugates 380425-09-2D, conjugates 380425-11-6D, conjugates 380425-13-8D, conjugates 380843-09-4D, conjugates 380843-12-9D, conjugates 380843-15-2D, conjugates 380843-17-4D, conjugates 380843-20-9D, conjugates 380843-23-2D, conjugates 380843-26-5D, conjugates 380843-29-8D, conjugates 380843-32-3D, conjugates 380843-36-7D, conjugates 380843-39-0D, conjugates 380843-42-5D, conjugates 380843-44-7D, conjugates 380843-47-0D, conjugates 380843-50-5D, conjugates 380843-53-8D, conjugates 380843-55-0D, conjugates 380843-58-3D, conjugates 380843-64-1D, conjugates 380843-66-3D, conjugates 380843-68-5D, conjugates 380843-70-9D, conjugates 380843-74-3D, conjugates 380843-75-4D, conjugates 380843-76-5D, conjugates 380843-77-6D, conjugates 380843-79-8D, conjugates 380843-81-2D, conjugates 380843-84-5D, conjugates 380843-86-7D, conjugates 381694-53-7D, conjugates 383123-03-3D, conjugates 388120-05-6D, conjugates 388626-12-8D, conjugates 388626-13-9D, conjugates 388626-14-0D, conjugates 388626-16-2D, conjugates 388626-20-8D, conjugates 388626-23-1D, conjugates 388626-25-3D, conjugates 388626-27-5D, conjugates 388626-31-1D, conjugates 388626-38-8D, conjugates 388626-40-2D, conjugates 388626-46-8D, conjugates 388626-49-1D, conjugates 388626-51-5D, conjugates 388626-54-8D, conjugates 388626-56-0D, conjugates 388626-58-2D, conjugates 388626-60-6D, conjugates 388626-62-8D, conjugates 388626-66-2D, conjugates 388626-68-4D, conjugates 388626-70-8D, conjugates 388626-73-1D, conjugates 388626-75-3D, conjugates 388626-78-6D, conjugates 388626-82-2D, conjugates 388626-84-4D, conjugates 388626-86-6D, conjugates 388626-89-9D, conjugates 388626-91-3D, conjugates 388626-93-5D, conjugates 388626-95-7D, conjugates 388626-97-9D, conjugates 388626-99-1D, conjugates 388627-01-8D, conjugates 388627-11-0D, conjugates 388627-13-2D, conjugates 388627-35-8D, conjugates 388627-55-2D, conjugates 388627-57-4D, conjugates 388627-59-6D, conjugates 388627-61-0D, conjugates 388627-76-7D, conjugates 391937-51-2D, conjugates 393590-60-8D, conjugates 413599-62-9D, conjugates 431916-96-0D, conjugates 439211-02-6, Streptactin 444722-95-6D, conjugates

RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT 452913-20-1D, conjugates 452913-27-8D, conjugates 501684-20-4D, conjugates 521059-79-0D, conjugates 582315-72-8D, conjugates 609359-65-1D, conjugates 666837-86-1D, conjugates 666837-87-2D, conjugates 666837-88-3D, conjugates 666837-89-4D, conjugates 666837-90-7D, conjugates 666837-91-8D, conjugates 666837-92-9D, conjugates 666837-93-0D, conjugates 666837-94-1D, conjugates 666837-95-2D, conjugates 666837-96-3D, conjugates 666837-98-5D, conjugates 666837-99-6D, conjugates 666838-00-2D, conjugates

666838-01-3D, conjugates 666838-02-4D, conjugates 666838-03-5D, conjugates 666838-04-6D, conjugates 666838-05-7D, conjugates 666838-06-8D, conjugates 666838-07-9D, conjugates 666838-08-0D, conjugates 666838-09-1D, conjugates 666838-11-5D, conjugates 666838-12-6D, conjugates 666838-13-7D, conjugates 666838-14-8D, conjugates 666838-15-9D, conjugates 666838-16-0D, conjugates 666838-17-1D, conjugates 666838-18-2D, conjugates 666838-19-3D, conjugates 666838-20-6D, conjugates 666838-21-7D, conjugates 666838-22-8D, conjugates 666838-23-9D, conjugates 666838-24-0D, conjugates 666838-25-1D, conjugates 666838-26-2D, conjugates 666838-27-3D, conjugates 666838-28-4D, conjugates 666838-30-8D, conjugates 666838-31-9D, conjugates 666838-32-0D, conjugates 666838-33-1D, conjugates 666838-34-2D, conjugates 666838-35-3D, conjugates 666838-36-4D, conjugates 666838-37-5D, conjugates 666838-38-6D, conjugates 666838-39-7D, conjugates 666838-40-0D, conjugates 666838-41-1D, conjugates 666838-42-2D, conjugates 666838-45-5D, conjugates 666838-47-7D, conjugates 666838-48-8D, conjugates 666838-49-9D, conjugates 666838-50-2D, conjugates 666838-51-3D, conjugates 666838-53-5D, conjugates 666838-54-6D, conjugates 666838-55-7D, conjugates 666838-56-8D, conjugates 666838-57-9D, conjugates 666838-58-0D, conjugates 666838-59-1D, conjugates 666838-60-4D, conjugates 666838-61-5D, conjugates 666838-62-6D, conjugates 666838-63-7D, conjugates 666838-64-8D, conjugates 666838-65-9D, conjugates 666838-66-0D, conjugates 666838-67-1D, conjugates 666838-68-2D, conjugates 666838-69-3D, conjugates 666838-70-6D, conjugates 666838-71-7D, conjugates 666838-72-8D, conjugates 666838-73-9D, conjugates 666838-74-0D, conjugates 666838-75-1D, conjugates 666838-76-2D, conjugates 666838-77-3D, conjugates 666838-78-4D, conjugates 666838-79-5D, conjugates 666838-80-8D, conjugates 666838-81-9D, conjugates 666838-82-0D, conjugates 666838-84-2D, conjugates 666838-85-3D, conjugates 666838-86-4D, conjugates 666838-87-5D, conjugates 666838-88-6D, conjugates 666838-89-7D, conjugates 666838-90-0D, conjugates 666838-91-1D, conjugates 666838-92-2D, conjugates 666838-93-3D, conjugates 666838-94-4D, conjugates 666838-95-5D, conjugates 666838-96-6D, conjugates 666838-97-7D, conjugates 666838-98-8D, conjugates 666839-00-5D, conjugates 666839-01-6D, conjugates 666839-02-7D, conjugates 666839-03-8D, conjugates 666839-04-9D, conjugates 666839-06-1D, conjugates 666839-07-2D, conjugates 666839-08-3D, conjugates

RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT 383-63-1, Ethyl trifluoroacetate 641-70-3, 3-Nitrophthalic anhydride 2528-30-5 17376-42-0 19741-14-1 37927-01-8 52853-40-4 54696-05-8 109745-15-5 134179-38-7 212844-54-7, Purvalanol B 264141-07-3 666839-13-0 666839-14-1 666839-15-2

RL: RCT (Reactant); RACT (Reactant or reagent)
(three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT 190020-14-5P 452913-11-0P 452913-12-1P 452913-13-2P 452913-14-3P 452913-15-4P 452913-16-5P 452913-17-6P 452913-18-7P 452913-19-8P 452913-20-1P 452913-21-2P 452913-23-4P 452913-24-5P 452913-25-6P 452913-26-7P 452913-27-8P 452913-28-9P 452913-29-0P 452913-30-3P 452913-31-4P 452913-32-5P 452913-33-6P 452913-34-7P 452913-35-8P 452913-36-9P 452913-37-0P 452913-38-1P 452913-39-2P 666839-16-3P

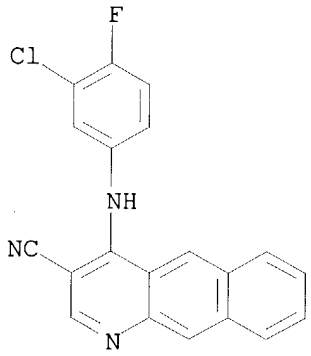
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT 83335-41-5, Dynorphin B (swine) 145935-81-5 668437-05-6 668514-59-8
668514-60-1 668514-61-2 668514-62-3 668514-63-4 668514-64-5
668514-65-6 668514-66-7 668514-67-8 668514-68-9 668514-69-0
668514-70-3 668514-71-4 668514-72-5 668514-73-6 668514-74-7
668514-75-8 668514-76-9 668514-77-0 668514-78-1 668514-79-2
668514-80-5 668514-81-6 668514-82-7 668514-83-8 668514-84-9
668514-85-0 668514-86-1 668514-87-2 668514-88-3 668514-89-4
668514-90-7 668514-91-8 668514-92-9 668514-93-0 668514-94-1
668514-95-2
RL: PRP (Properties)
(unclaimed sequence; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT **348617-19-6D**, conjugates
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

RN 348617-19-6 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(3-chloro-4-fluorophenyl)amino]- (9CI) (CA INDEX NAME)



L7 ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:907762 HCAPLUS
DN 140:314392
ED Entered STN: 20 Nov 2003
TI 3D-QSAR and docking studies on 4-anilinoquinazoline and 4-anilinoquinoline epidermal growth factor receptor (EGFR) tyrosine kinase inhibitors
AU Assefa, Haregewein; Kamath, Shantaram; Buolamwini, John K.
CS College of Pharmacy, Department of Pharmaceutical Sciences, University of Tennessee Health Sciences Center, Memphis, TN, 38163, USA
SO Journal of Computer-Aided Molecular Design (2003), 17(8), 475-493
CODEN: JCADEQ; ISSN: 0920-654X
PB Kluwer Academic Publishers
DT Journal
LA English
CC 1-3 (Pharmacology)
AB The overexpression and/or mutation of the epidermal growth factor receptor (EGFR) tyrosine kinase has been observed in many human solid tumors, and is under intense investigation as a novel anticancer mol. target. Comparative 3D-QSAR analyses using different alignments were undertaken

employing comparative mol. field anal. (CoMFA) and comparative mol. similarity anal. (CoMSIA) for 122 anilinoquinazoline and 50 anilinoquinoline inhibitors of EGFR kinase. The SYBYL multifit alignment rule was applied to three different conformational templates, two obtained from a MacroModel Monte Carlo conformational search, and one from the bound conformation of erlotinib in complex with EGFR in the x-ray crystal structure. In addition, a flexible ligand docking alignment obtained with the GOLD docking program, and a novel flexible receptor-guided consensus dynamics alignment obtained with the DISCOVER program in the INSIGHTII modeling package were also investigated. 3D-QSAR models with q2 values up to 0.70 and r2 values up to 0.97 were obtained. Among the 4-anilinoquinazoline set, the q2 values were similar, but the ability of the different conformational models to predict the activities of an external test set varied considerably. In this regard, the model derived using the x-ray crystallog. determined bioactive conformation of erlotinib afforded the best predictive model. Electrostatic, hydrophobic and H-bond donor descriptors contributed the most to the QSAR models of the 4-anilinoquinazolines, whereas electrostatic, hydrophobic and H-bond acceptor descriptors contributed the most to the 4-anilinoquinoline QSAR, particularly the H-bond acceptor descriptor. A novel receptor-guided consensus dynamics alignment has also been introduced for 3D-QSAR studies. This new alignment method may incorporate to some extent ligand-receptor induced fit effects into 3D-QSAR models.

ST mol modeling docking anilinoquinazoline anilinoquinoline EGFR tyrosine kinase inhibitor; receptor guided consensus dynamics 3DQSAR CoMFA CoMSIA

IT Antitumor agents
Conformation
Drug targets
Hydrogen bond
Lipophilicity
Molecular modeling
QSAR (structure-activity relationship)
(3D-QSAR and docking studies on 4-anilinoquinazoline and 4-anilinoquinoline EGFR tyrosine kinase inhibitors)

IT Epidermal growth factor receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(3D-QSAR and docking studies on 4-anilinoquinazoline and 4-anilinoquinoline EGFR tyrosine kinase inhibitors)

IT QSAR (structure-activity relationship)
(comparative mol. field anal.; 3D-QSAR and docking studies on 4-anilinoquinazoline and 4-anilinoquinoline EGFR tyrosine kinase inhibitors)

IT Electricity
(electrostatics; 3D-QSAR and docking studies on 4-anilinoquinazoline and 4-anilinoquinoline EGFR tyrosine kinase inhibitors)

IT Structure-activity relationship
(enzyme-inhibiting; 3D-QSAR and docking studies on 4-anilinoquinazoline and 4-anilinoquinoline EGFR tyrosine kinase inhibitors)

IT Neoplasm
(solid; 3D-QSAR and docking studies on 4-anilinoquinazoline and 4-anilinoquinoline EGFR tyrosine kinase inhibitors)

IT 79079-06-4, Epidermal growth factor receptor tyrosine kinase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(3D-QSAR and docking studies on 4-anilinoquinazoline and 4-anilinoquinoline EGFR tyrosine kinase inhibitors)

IT 91-22-5D, Quinoline, 4-anilino derivs. 21561-09-1 22754-10-5 34923-95-0 34923-95-0D, 4-Anilinoquinazoline, derivs. 47155-57-7 49675-75-4 70137-95-0 88404-44-8 100818-54-0 111157-70-1 111157-71-2 146885-03-2 146885-05-4 146885-14-5 146885-16-7

153436-53-4 153436-54-5 169205-53-2 169205-55-4 169205-61-2
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171745-21-4 171745-26-9 173215-81-1 174709-30-9 174709-31-0
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189018-87-9 189018-93-7 189018-94-8 189018-97-1 189018-98-2
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679000-00-1 679000-01-2 679000-03-4 679000-04-5 679000-05-6
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679000-27-2 679000-28-3 679000-29-4

RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(3D-QSAR and docking studies on 4-anilinoquinazoline and 4-anilinoquinoline EGFR tyrosine kinase inhibitors)

RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD

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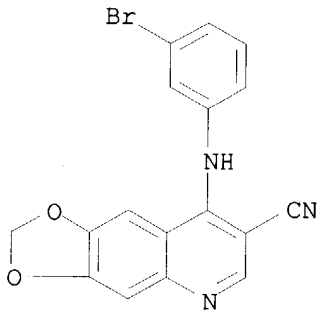
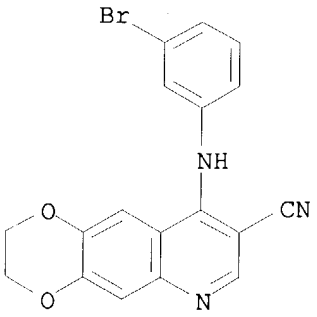
IT **214484-26-1 294175-26-1 294175-29-4**
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(3D-QSAR and docking studies on 4-anilinoquinazoline and 4-anilinoquinoline EGFR tyrosine kinase inhibitors)

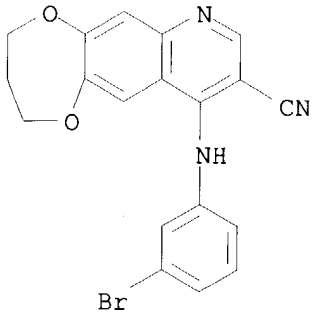
RN 214484-26-1 HCAPLUS
CN 1,3-Dioxolo[4,5-g]quinoline-7-carbonitrile, 8-[(3-bromophenyl)amino]- (9CI) (CA INDEX NAME)



RN 294175-26-1 HCAPLUS
CN 1,4-Dioxino[2,3-g]quinoline-8-carbonitrile, 9-[(3-bromophenyl)amino]-2,3-dihydro- (9CI) (CA INDEX NAME)



RN 294175-29-4 HCAPLUS
CN 2H-[1,4]Dioxepino[2,3-g]quinoline-9-carbonitrile, 10-[(3-bromophenyl)amino]-3,4-dihydro- (9CI) (CA INDEX NAME)



L7 ANSWER 3 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:651914 HCAPLUS
DN 140:16633
ED Entered STN: 21 Aug 2003
TI Regioselective synthesis of a potent Src kinase inhibitor: 4-(2,4-dichloro-5-methoxyphenylamino)-7-methoxy-8-(2-morpholin-4-ylethoxy)benzo[g]quinoline-3-carbonitrile
AU Berger, Dan M.; Birnberg, Gary; DeMorin, Frenel; Dutia, Minu; Powell, Dennis; Wang, Yanong D.
CS Chemical Sciences, Wyeth Research, Pearl River, NY, 10965, USA
SO Synthesis (2003), (11), 1712-1716
CODEN: SYNTBF; ISSN: 0039-7881
PB Georg Thieme Verlag
DT Journal
LA English
CC 27-17 (Heterocyclic Compounds (One Hetero Atom))
OS CASREACT 140:16633
AB The regioselective synthesis of the title compound, a potent Src kinase inhibitor, is described. A key step in this synthesis is the regioselective thermal rearrangement of a substituted benzocyclobutene to provide a 2,3,6,7-tetrasubstituted naphthalene. An efficient route to the uniquely substituted benzocyclobutene is reported.
ST dichloromethoxyphenylaminomethoxymorpholinylethoxybenzoquinolinecarbonitrile prepn; benzoquinolinecarbonitrile dichloromethoxyphenylaminomethoxymorpholinylethoxy prepn
IT Regiochemistry
(regioselective synthesis of 4-(2,4-dichloro-5-methoxyphenylamino)-7-methoxy-8-(2-morpholin-4-ylethoxy)benzo[g]quinoline-3-carbonitrile via preparation of substituted benzocyclobutene and its regioselective thermal rearrangement)
IT Rearrangement
(thermal; regioselective synthesis of 4-(2,4-dichloro-5-methoxyphenylamino)-7-methoxy-8-(2-morpholin-4-ylethoxy)benzo[g]quinoline-3-carbonitrile via preparation of substituted benzocyclobutene and its regioselective thermal rearrangement)
IT 622-40-2, 2-Morpholinoethanol 624-92-0, Dimethyl disulfide 882-33-7, Diphenyl disulfide 1142-19-4, Bis(4-chlorophenyl) disulfide 33693-48-0 98446-49-2, 2,4-Dichloro-5-methoxyaniline
RL: RCT (Reactant); RACT (Reactant or reagent)
(regioselective synthesis of 4-(2,4-dichloro-5-methoxyphenylamino)-7-methoxy-8-(2-morpholin-4-ylethoxy)benzo[g]quinoline-3-carbonitrile via preparation of substituted benzocyclobutene and its regioselective thermal rearrangement)
IT 53544-07-3P 222622-96-0P 348618-45-1P 348618-46-2P 348618-47-3P

348618-48-4P 348618-49-5P 348618-51-9P 348618-52-0P 348619-45-4P
629652-75-1P 629652-76-2P 629652-77-3P 629652-78-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(regioselective synthesis of 4-(2,4-dichloro-5-methoxyphenylamino)-7-methoxy-8-(2-morpholin-4-ylethoxy)benzo[g]quinoline-3-carbonitrile via preparation of substituted benzocyclobutene and its regioselective thermal rearrangement)

IT **348618-40-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(regioselective synthesis of 4-(2,4-dichloro-5-methoxyphenylamino)-7-methoxy-8-(2-morpholin-4-ylethoxy)benzo[g]quinoline-3-carbonitrile via preparation of substituted benzocyclobutene and its regioselective thermal rearrangement)

RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD

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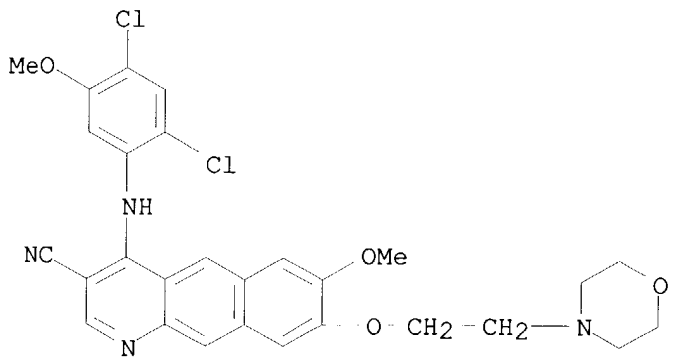
(28) Zhang, N; Bioorg Med Chem Lett 2002, V12, P423 HCAPLUS

IT **348618-40-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(regioselective synthesis of 4-(2,4-dichloro-5-methoxyphenylamino)-7-methoxy-8-(2-morpholin-4-ylethoxy)benzo[g]quinoline-3-carbonitrile via preparation of substituted benzocyclobutene and its regioselective thermal rearrangement)

RN 348618-40-6 HCAPLUS

CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichloro-5-methoxyphenyl)amino]-7-methoxy-8-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)



L7 ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:261046 HCAPLUS
DN 138:287684
ED Entered STN: 04 Apr 2003
TI Preparation of aromatic tricyclic compounds containing quinolinonitrile rings as protein kinase inhibitors
IN Tsou, Hwei-Ru; Overbeek-Klumpers, Elsebe Geraldine; Wissner, Allan
PA American Home Products Corporation, USA
SO U.S. Pat. Appl. Publ., 87 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM C07D043-02
ICS C07D221-22
NCL 544333000; 544298000; 544322000; 546079000
CC 28-13 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 1, 7, 63
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003065180	A1	20030403	US 2001-820132	20010328
	US 6608048	B2	20030819		
PRAI	US 2000-304206P	P	20000328		
	US 2000-536919	A	20000328		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2003065180	ICM	C07D043-02
	ICS	C07D221-22
	NCL	544333000; 544298000; 544322000; 546079000
US 2003065180	ECLA	C07D498/04; C07D513/04

OS MARPAT 138:287684
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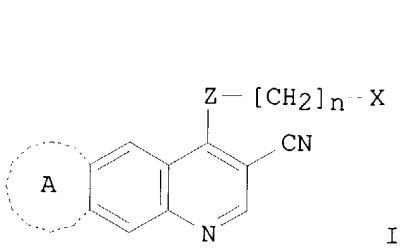

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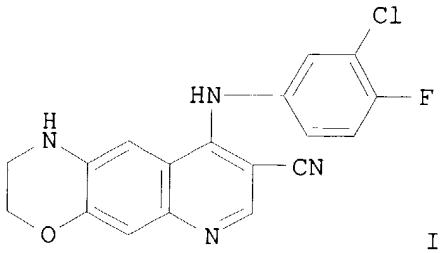


II

AB Aromatic tricyclic compds., such as I [Z = NH, O, NR; R = alkyl, carboalkyl; X = (un)substituted cycloalkyl, pyridyl, pyrimidinyl, etc.; n = 0-1; A = (un)substituted oxazino, thiazino, etc.], or a pharmaceutically acceptable salt thereof were prepared for their use as inhibitors of protein tyrosine kinase, antiproliferative agents and in the treatment of polycystic kidney disease. Thus, quinolinonitrile derivative II was prepared via a multistep synthetic sequence starting from 3-methoxyphenylamine, 2-cyano-3-ethoxy-acrylic acid Et ester, 3-chloro-4-fluoro-phenylamine and 2-ethoxyethanol. II had IC50 = 1μM for EGF-R kinase (recombinant enzyme) and inhibited cancer cell growth of MDA435 cell line with IC50 = 1.43 μM (2 trials).

ST quinolinonitrile arom tricyclic compd prepn protein kinase inhibitor; EGF receptor kinase inhibitor oxazinoquinoline prepn; quinoline oxazino deriv quinolinonitrile antitumor prepn

IT Polycyclic compounds
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(aromatic; preparation of aromatic tricyclic compds. containing quinolinonitrile rings as protein kinase inhibitors)

IT Intestine, neoplasm
(colon, inhibition; preparation of oxazinoquinoline derivs. as protein kinase inhibitors)

IT Growth factor receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(erbB-3; preparation of oxazinoquinoline derivs. as protein kinase inhibitors)

IT Growth factor receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(heregulin, ErbB-4; preparation of oxazinoquinoline derivs. as protein kinase inhibitors)

IT Neoplasm
(inhibition or treatment; preparation of oxazinoquinoline derivs. as protein kinase inhibitors)

IT Bladder, neoplasm
Brain, neoplasm
Kidney, neoplasm
Larynx, neoplasm
Liver, neoplasm
Lung, neoplasm
Mammary gland, neoplasm
Mouth, neoplasm
Ovary, neoplasm
Pancreas, neoplasm
Prostate gland, neoplasm

Stomach, neoplasm
(inhibition; preparation of oxazinoquinoline derivs. as protein kinase inhibitors)

IT Aromatic compounds
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(polycyclic; preparation of aromatic tricyclic compds. containing quinolinonitrile
rings as protein kinase inhibitors)

IT Kidney, disease
(polycystic, treatment; preparation of oxazinoquinoline derivs. as protein kinase inhibitors)

IT Antitumor agents
Human
(preparation of oxazinoquinoline derivs. as protein kinase inhibitors)

IT Carcinoma
(squamous cell, inhibition; preparation of oxazinoquinoline derivs. as protein kinase inhibitors)

IT Polycyclic compounds
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(tricyclic; preparation of aromatic tricyclic compds. containing quinolinonitrile
rings as protein kinase inhibitors)

IT 79079-06-4, EGF-R Kinase 80449-02-1, Tyrosine kinase 137632-03-2, Tyrosine kinase met 137632-09-8, ErbB-2 tyrosine kinase 139691-76-2, c-Raf Kinase 141349-89-5, Src- Kinase 340830-03-7, Receptor tyrosine Kinase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(preparation of oxazinoquinoline derivs. as protein kinase inhibitors)

IT **364371-69-7P 364371-70-0P 364371-71-1P 364371-73-3P 364371-74-4P 364371-76-6P 364371-85-7P 364371-86-8P**
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of oxazinoquinoline derivs. as protein kinase inhibitors)

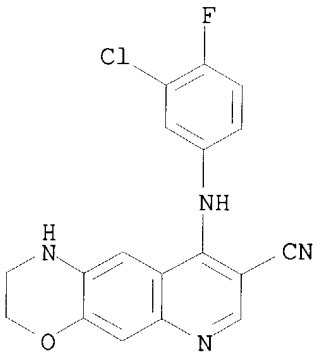
IT **364371-77-7P** 364371-82-4P **364371-87-9P**
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of oxazinoquinoline derivs. as protein kinase inhibitors)

IT 94-05-3 99-59-2 110-80-5, 2-Ethoxyethanol 124-40-3, Dimethylamine, reactions 367-21-5 536-90-3, 3-Methoxy-phenylamine 554-00-7, 2,4-Dichlorophenylamine 4635-59-0, 4-Chlorobutyryl chloride 5308-25-8, 1-Ethylpiperazine 6139-84-0, 4-Chloro-butyraldehyde 51544-74-2, 4-Bromocrotonyl chloride 98446-49-2, 2,4-Dichloro-5-methoxyaniline 364371-72-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of oxazinoquinoline derivs. as protein kinase inhibitors)

IT 33721-54-9P 64353-88-4P 71083-64-2P 214470-27-6P 214470-33-4P 214485-59-3P 214485-60-6P 364371-68-6P **364371-75-5P** 364371-79-9P 364371-80-2P 364371-81-3P 364371-83-5P 364371-84-6P 503812-11-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of oxazinoquinoline derivs. as protein kinase inhibitors)

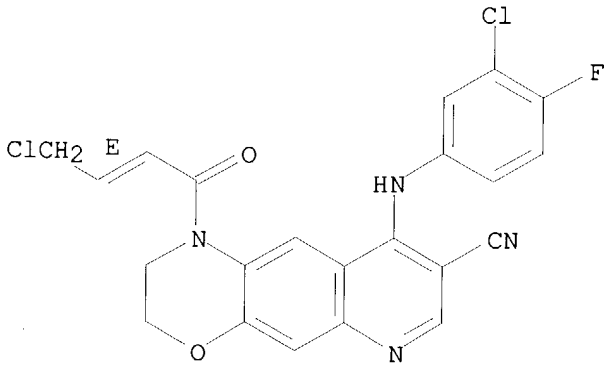
IT **364371-69-7P 364371-70-0P 364371-71-1P**
364371-73-3P 364371-74-4P 364371-76-6P
364371-85-7P 364371-86-8P
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of oxazinoquinoline derivs. as protein kinase inhibitors)

RN 364371-69-7 HCAPLUS
CN 1H-Pyrido[3,2-g][1,4]benzoxazine-8-carbonitrile, 9-[(3-chloro-4-fluorophenyl)amino]-2,3-dihydro- (9CI) (CA INDEX NAME)



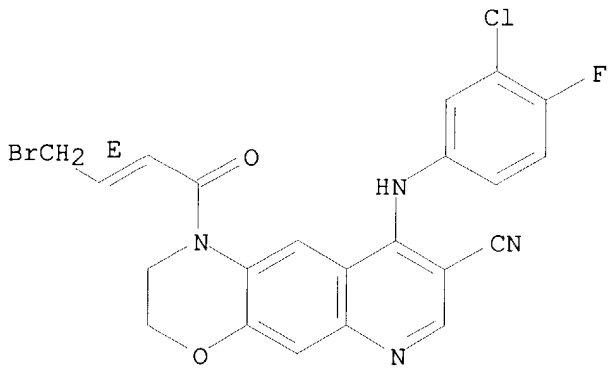
RN 364371-70-0 HCAPLUS
CN 1H-Pyrido[3,2-g][1,4]benzoxazine-8-carbonitrile, 9-[(3-chloro-4-fluorophenyl)amino]-1-[(2E)-4-chloro-1-oxo-2-butenyl]-2,3-dihydro- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



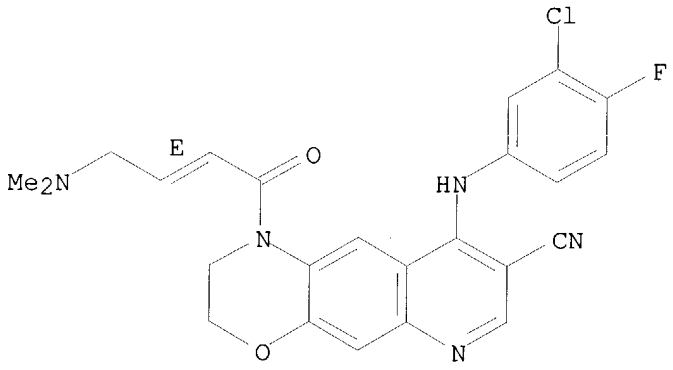
RN 364371-71-1 HCAPLUS
CN 1H-Pyrido[3,2-g][1,4]benzoxazine-8-carbonitrile, 1-[(2E)-4-bromo-1-oxo-2-butenyl]-9-[(3-chloro-4-fluorophenyl)amino]-2,3-dihydro- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

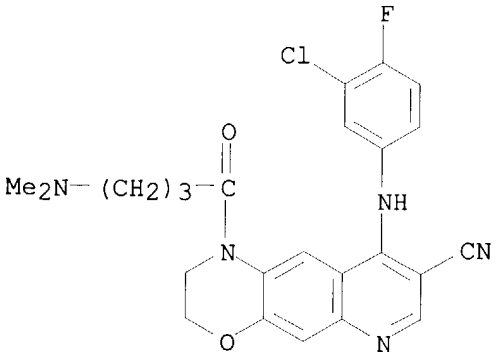


RN 364371-73-3 HCAPLUS
CN 1H-Pyrido[3,2-g][1,4]benzoxazine-8-carbonitrile, 9-[(3-chloro-4-fluorophenyl)amino]-1-[(2E)-4-(dimethylamino)-1-oxo-2-butenyl]-2,3-dihydro- (9CI) (CA INDEX NAME)

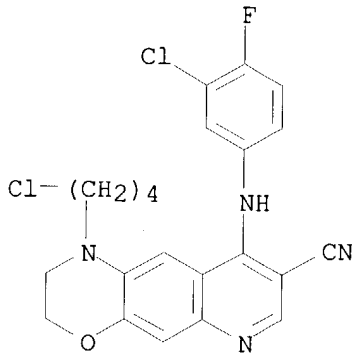
Double bond geometry as shown.



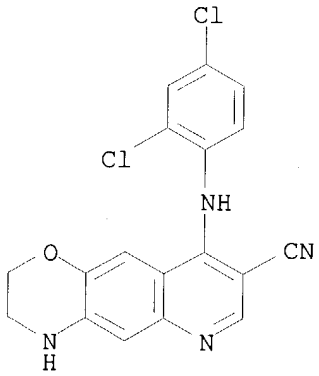
RN 364371-74-4 HCAPLUS
CN 1H-Pyrido[3,2-g][1,4]benzoxazine-8-carbonitrile, 9-[(3-chloro-4-fluorophenyl)amino]-1-[4-(dimethylamino)-1-oxobutyl]-2,3-dihydro- (9CI) (CA INDEX NAME)



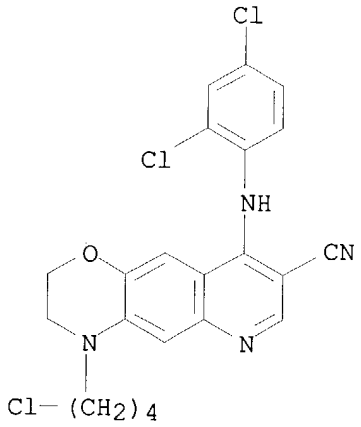
RN 364371-76-6 HCAPLUS
CN 1H-Pyrido[3,2-g][1,4]benzoxazine-8-carbonitrile, 1-(4-chlorobutyl)-9-[(3-chloro-4-fluorophenyl)amino]-2,3-dihydro- (9CI) (CA INDEX NAME)



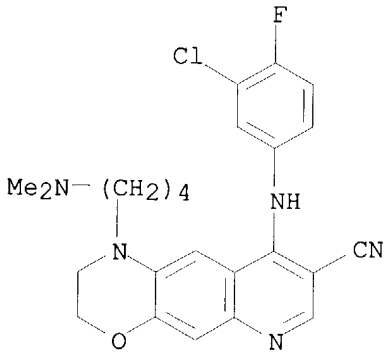
RN 364371-85-7 HCAPLUS
CN 2H-Pyrido[2,3-g]-1,4-benzoxazine-8-carbonitrile, 9-[(2,4-dichlorophenyl)amino]-3,4-dihydro- (9CI) (CA INDEX NAME)



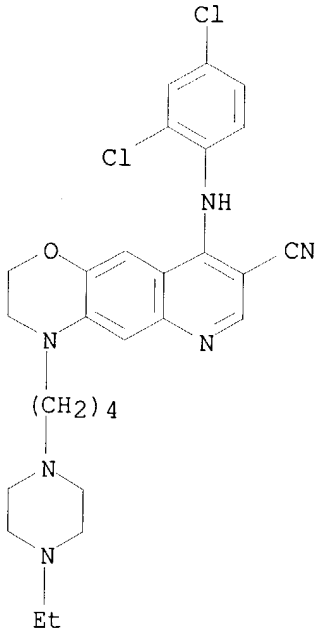
RN 364371-86-8 HCAPLUS
CN 2H-Pyrido[2,3-g]-1,4-benzoxazine-8-carbonitrile, 4-(4-chlorobutyl)-9-[(2,4-dichlorophenyl)amino]-3,4-dihydro- (9CI) (CA INDEX NAME)



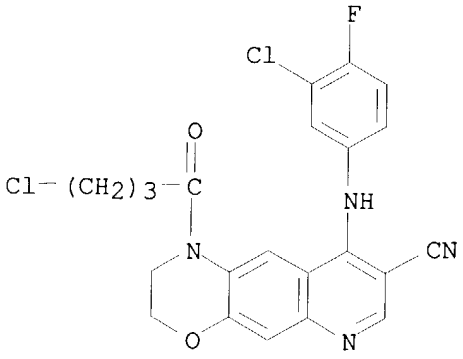
IT **364371-77-7P 364371-87-9P**
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of oxazinoquinoline derivs. as protein kinase inhibitors)
RN 364371-77-7 HCAPLUS
CN 1H-Pyrido[3,2-g][1,4]benzoxazine-8-carbonitrile, 9-[(3-chloro-4-fluorophenyl)amino]-1-[4-(dimethylamino)butyl]-2,3-dihydro- (9CI) (CA INDEX NAME)



RN 364371-87-9 HCAPLUS
CN 2H-Pyrido[2,3-g]-1,4-benzoxazine-8-carbonitrile, 9-[(2,4-dichlorophenyl)amino]-4-[4-(4-ethyl-1-piperazinyl)butyl]-3,4-dihydro- (9CI) (CA INDEX NAME)



IT **364371-75-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of oxazinoquinoline derivs. as protein kinase inhibitors)
RN 364371-75-5 HCAPLUS
CN 1H-Pyrido[3,2-g][1,4]benzoxazine-8-carbonitrile, 9-[(3-chloro-4-fluorophenyl)amino]-1-(4-chloro-1-oxobutyl)-2,3-dihydro- (9CI) (CA INDEX NAME)



L7 ANSWER 5 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:675124 HCAPLUS
DN 138:204983
ED Entered STN: 06 Sep 2002
TI 8-Anilinoimidazo[4,5-g]quinoline-7-carbonitriles as Src kinase inhibitors
AU Berger, Dan; Dutia, Minu; Powell, Dennis; Wu, Biqi; Wissner, Allan; DeMorin, Frenel; Weber, Jennifer; Boschelli, Frank

CS Chemical Sciences, Wyeth-Ayerst Research, Pearl River, NY, 10965, USA
SO Bioorganic & Medicinal Chemistry Letters (2002), 12(19), 2761-2765
CODEN: BMCLE8; ISSN: 0960-894X
PB Elsevier Science Ltd.
DT Journal
LA English
CC 28-9 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 1
OS CASREACT 138:204983
AB A series of 8-anilinoimidazo[4,5-g]quinoline-7-carbonitriles was synthesized and evaluated as Src kinase inhibitors. Several aniline substituents were surveyed, as well as water-solubilizing groups at the C-2 and N-3 positions. Potent Src inhibitors were identified, with N-3 providing the best position for an addnl. water-solubilizing group.
ST anilinoimidazoquinolinecarbonitrile prepn Src kinase inhibitor
IT 141349-89-5, Src kinase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(preparation of 8-anilinoimidazo[4,5-g]quinoline-7-carbonitriles as Src kinase inhibitors)
IT **348617-44-7P 348617-46-9P 348617-51-6P**
348617-52-7P 348617-54-9P 348617-56-1P
348617-62-9P 348617-71-0P 500023-77-8P
500023-78-9P 500023-79-0P 500023-80-3P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation of 8-anilinoimidazo[4,5-g]quinoline-7-carbonitriles as Src kinase inhibitors)
IT 825-41-2, 3-Chloro-4-nitroaniline 873-38-1, 2-Bromo-4-chloroaniline 2038-03-1, 4-(2-Aminoethyl)morpholine 2401-24-3, 2-Chloro-5-methoxyaniline 24313-88-0, 3,4,5-Trimethoxyaniline 50868-72-9, 5-Methoxy-2-methylaniline 62492-42-6, 4-Chloro-5-methoxy-2-methylaniline 63224-35-1, 2-Morpholinoethyl isothiocyanate 98446-57-2, 2-Bromo-4-chloro-5-methoxyaniline
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of 8-anilinoimidazo[4,5-g]quinoline-7-carbonitriles as Src kinase inhibitors)
IT 131775-97-8P 263149-39-9P 348617-31-2P 348617-33-4P 348617-34-5P 348617-42-5P 348617-43-6P 348617-45-8P 348617-48-1P 348617-59-4P 348617-60-7P **348617-61-8P** 348617-68-5P 348617-69-6P 348619-35-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of 8-anilinoimidazo[4,5-g]quinoline-7-carbonitriles as Src kinase inhibitors)
RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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(2) Arnold, L; Bioorg Med Chem Lett 2000, V10, P2167 HCAPLUS
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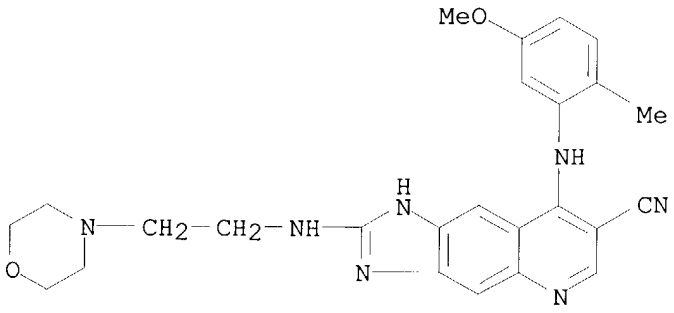
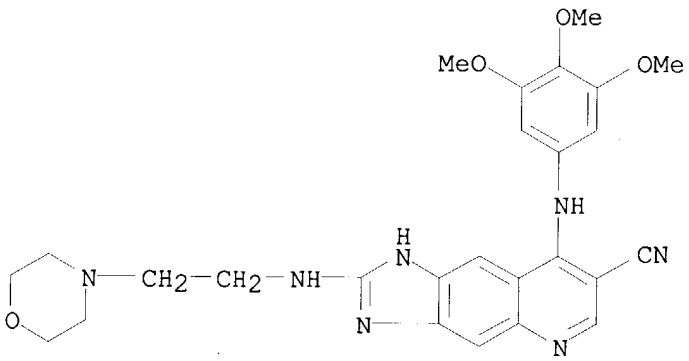
(22) Wissner, A; J Med Chem 2000, V43, P3244 HCAPLUS
(23) Zhang, N; Bioorg Med Chem Lett 2000, V10, P2825 HCAPLUS
(24) Zhang, N; Bioorg Med Chem Lett 2001, V11, P1407 HCAPLUS

IT **348617-44-7P 348617-46-9P 348617-51-6P**
348617-52-7P 348617-54-9P 348617-56-1P
348617-62-9P 348617-71-0P 500023-77-8P
500023-78-9P 500023-79-0P 500023-80-3P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation of 8-anilinoimidazo[4,5-g]quinoline-7-carbonitriles as Src kinase inhibitors)

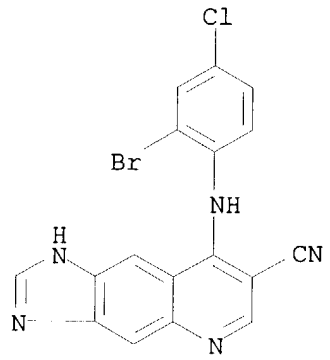
RN 348617-44-7 HCAPLUS
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(5-methoxy-2-methylphenyl)amino]-2-[[2-(4-morpholinyl)ethyl]amino]- (9CI) (CA INDEX NAME)



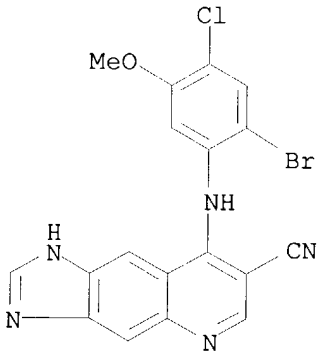
RN 348617-46-9 HCAPLUS
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 2-[[2-(4-morpholinyl)ethyl]amino]-8-[(3,4,5-trimethoxyphenyl)amino]- (9CI) (CA INDEX NAME)



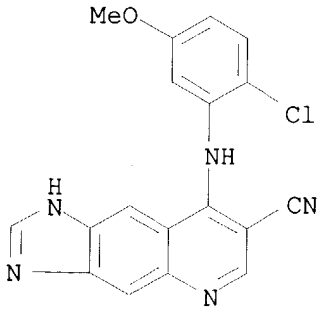
RN 348617-51-6 HCAPLUS
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(2-bromo-4-chlorophenyl)amino]- (9CI) (CA INDEX NAME)



RN 348617-52-7 HCAPLUS
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(2-bromo-4-chloro-5-methoxyphenyl)amino]- (9CI) (CA INDEX NAME)

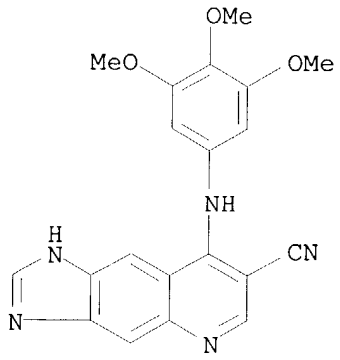


RN 348617-54-9 HCAPLUS
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(2-chloro-5-methoxyphenyl)amino]- (9CI) (CA INDEX NAME)

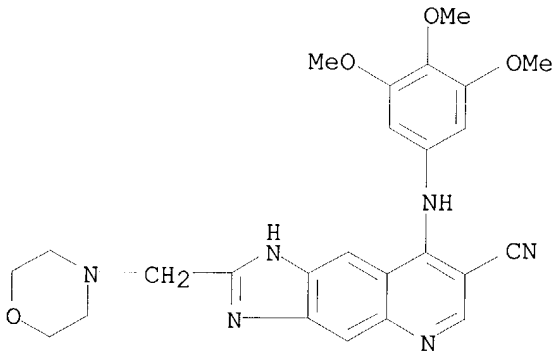


RN 348617-56-1 HCAPLUS

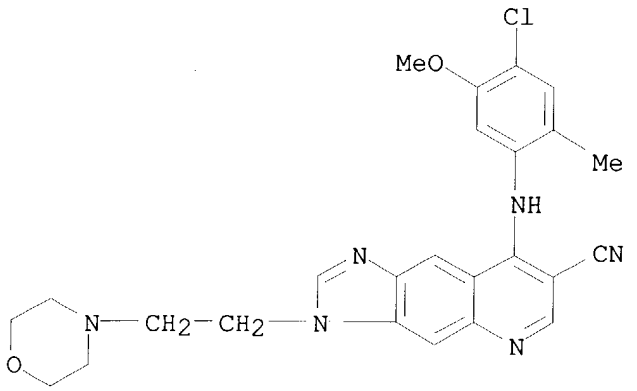
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(3,4,5-trimethoxyphenyl)amino]- (9CI) (CA INDEX NAME)



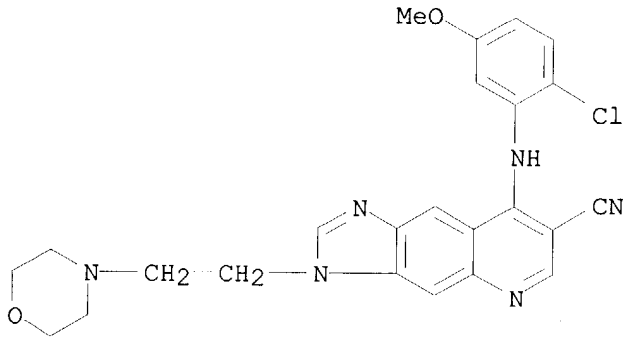
RN 348617-62-9 HCAPLUS
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 2-(4-morpholinylmethyl)-8-[(3,4,5-trimethoxyphenyl)amino]- (9CI) (CA INDEX NAME)



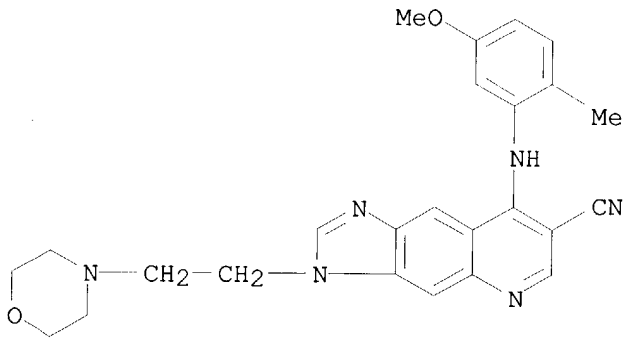
RN 348617-71-0 HCAPLUS
CN 3H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(4-chloro-5-methoxy-2-methylphenyl)amino]-3-[2-(4-morpholinyl)ethyl]- (9CI) (CA INDEX NAME)



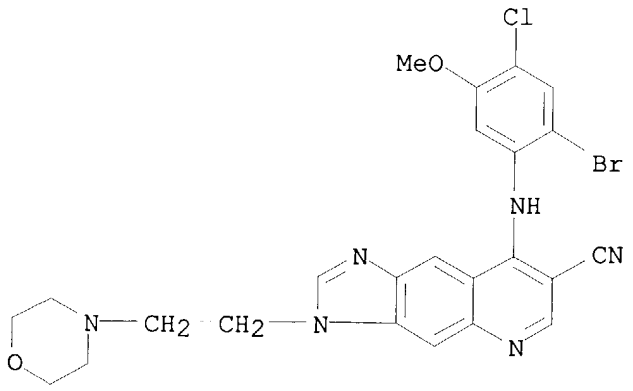
RN 500023-77-8 HCAPLUS
CN 3H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(2-chloro-5-methoxyphenyl)amino]-3-[2-(4-morpholinyl)ethyl]- (9CI) (CA INDEX NAME)



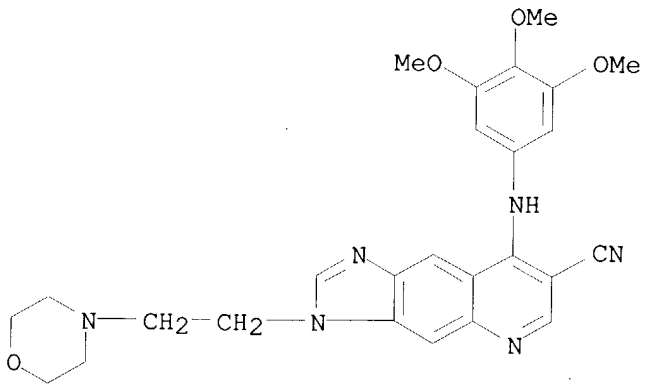
RN 500023-78-9 HCAPLUS
CN 3H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(5-methoxy-2-methylphenyl)amino]-3-[2-(4-morpholinyl)ethyl]- (9CI) (CA INDEX NAME)



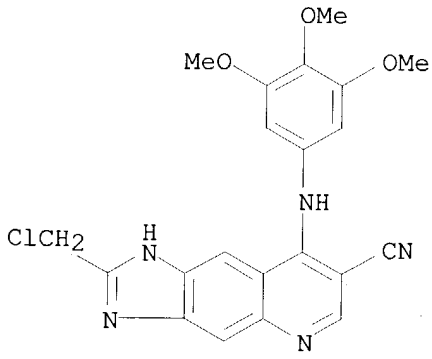
RN 500023-79-0 HCAPLUS
CN 3H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(2-bromo-4-chloro-5-methoxyphenyl)amino]-3-[2-(4-morpholinyl)ethyl]- (9CI) (CA INDEX NAME)



RN 500023-80-3 HCAPLUS
CN 3H-Imidazo[4,5-g]quinoline-7-carbonitrile, 3-[2-(4-morpholinyl)ethyl]-8-[(3,4,5-trimethoxyphenyl)amino]- (9CI) (CA INDEX NAME)



IT **348617-61-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of 8-anilinoimidazo[4,5-g]quinoline-7-carbonitriles as Src kinase inhibitors)
RN 348617-61-8 HCAPLUS
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 2-(chloromethyl)-8-[(3,4,5-trimethoxyphenyl)amino]- (9CI) (CA INDEX NAME)



L7 ANSWER 6 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:521696 HCAPLUS
DN 137:93765
ED Entered STN: 12 Jul 2002
TI Regioselective preparation of benzo[g]quinoline-3-carbonitriles and benzo[g]quinazolines for the treatment of mammalian cancer and polycystic kidney disease
IN Berger, Dan Maarten; Birnberg, Gary Harold; Wang, Yanong
PA Wyeth, John, and Brother Ltd., USA
SO PCT Int. Appl., 94 pp.
CODEN: PIXXD2

DT Patent
LA English
IC ICM C07C253-30
ICS C07C227-16; C07D221-08; C07D239-70; C07C255-59; C07C255-58; C07C229-70
CC 28-16 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 1
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002053528	A1	20020711	WO 2001-US47939	20011211
	WO 2002053528	C1	20021121		
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	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1345889	A1	20030924	EP 2001-986524	20011211
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
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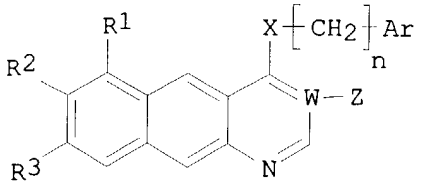
	US 2002091273	A1	20020711	US 2002-43528	20020111
PRAI	US 2000-259190P	P	20001229		
	WO 2001-US47939	W	20011211		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2002053528	ICM	C07C253-30
	ICS	C07C227-16; C07D221-08; C07D239-70; C07C255-59; C07C255-58; C07C229-70
JP 2004523509	FTERM	4C056/AA02; 4C056/AB01; 4C056/AC03; 4C056/AD01; 4C056/AE01; 4C056/EA07; 4C056/EB01; 4C056/EC16; 4C056/ED01; 4C063/AA01; 4C063/AA03; 4C063/BB01; 4C063/BB03; 4C063/CC25; 4C063/CC54; 4C063/DD14; 4C063/EE01; 4C086/AA03; 4C086/AA04; 4C086/BC27; 4C086/BC28; 4C086/GA07; 4C086/GA12; 4C086/ZA81; 4C086/ZB26; 4H006/AA01; 4H006/AA02; 4H006/AB28; 4H006/AC28; 4H006/BJ50; 4H006/BP30; 4H006/BS30; 4H006/BU48; 4H039/CA71; 4H039/CD20

OS MARPAT 137:93765
GI



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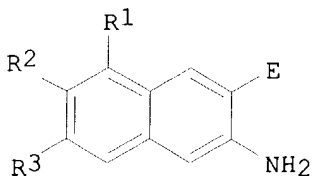
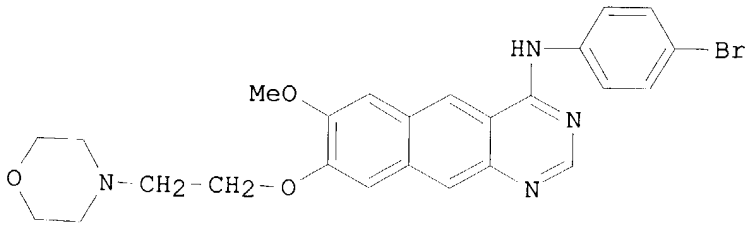


II



III

AB This invention discloses a regioselective a method for the syntheses of title compds. I as protein kinase inhibitors, via 2-aminonaphthalenes II [wherein; W = C, Z = CN; W = N then Z is absent; E = CN, alkoxycarbonyl, CO2Ph, etc.; Ar = (un)substituted cycloalkyl, Ph, heteroarom., etc.; R1, R2, R3 = H, halo, OH, etc.; X = NR, O, S; R = H, alkyl; n = 0-1], which were generated from the thermal ring opening-cyclization of substituted 3-amino-3-(arylsulfanylbicyclo[4.2.0]octa-1,3,5-trien-7-yl)acrylates. For example, condensation of 4-chloro-7-methoxy-8-(2-morpholin-4-ylethoxy)benzo[g]quinazoline, prepared in 5 steps from II (E = tert-BuO2C, R3 = OBn, R2 = OMe) and 3-bromoaniline in the presence of pyridine hydrochloride in isopropanol provided the benzo[g]quinazoline III.2HCl. The compds. derived from this invention are useful for the treatment of a variety of diseases that are a result of protein kinase deregulation. Specifically, compds. I are useful for the treatment of cancer and polycystic kidney disease in mammals (no data provided).

ST prepn benzoquinoline benzoquinazoline polycystic kidney disease antitumor protein kinase; aminonaphthalene benzocyclobutene thermal ring opening cyclization prepn

IT Kidney, disease
(polycystic, treatment of; preparation of benzo[g]quinoline-3-carbonitriles and benzo[g]quinazolines as protein kinase inhibitors)

IT Antitumor agents
Cyclization
(preparation of benzo[g]quinoline-3-carbonitriles and benzo[g]quinazolines as protein kinase inhibitors)

IT Ring opening
(thermal; preparation of benzo[g]quinoline-3-carbonitriles and benzo[g]quinazolines as protein kinase inhibitors)

IT Neoplasm
(treatment of; preparation of benzo[g]quinoline-3-carbonitriles and benzo[g]quinazolines as protein kinase inhibitors)

IT 51364-51-3, Tris(dibenzylideneacetone) dipalladium
RL: CAT (Catalyst use); USES (Uses)
(catalysis; preparation of benzo[g]quinoline-3-carbonitriles and benzo[g]quinazolines as protein kinase inhibitors)

IT **348618-58-6P 348618-60-0P 348618-61-1P**
348618-62-2P 348618-63-3P 348618-66-6P

348618-67-7P 348618-68-8P 441068-37-7P 441068-39-9P
441068-40-2P 441068-41-3P
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(drug candidate; preparation of benzo[g]quinoline-3-carbonitriles and benzo[g]quinazolines as protein kinase inhibitors)

IT 80449-02-1, Protein tyrosine kinase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibition of; preparation of benzo[g]quinoline-3-carbonitriles and benzo[g]quinazolines as protein kinase inhibitors)

IT 53544-07-3P, 4-Benzyloxy-3-methoxybicyclo[4.2.0]octa-1,3,5-triene-7-carbonitrile 222622-96-0P **348618-37-1P** 348618-45-1P, 3-(4-Benzyloxy-2-bromo-5-methoxyphenyl)propionitrile 348618-46-2P, 4-Benzyloxy-7-(4-chlorophenylsulfanyl)-3-methoxybicyclo[4.2.0]octa-1,3,5-triene-7-carbonitrile 348618-47-3P, 4-Benzyloxy-3-methoxy-7-phenylsulfanylbicyclo[4.2.0]octa-1,3,5-triene-7-carbonitrile 348618-48-4P, 3-Amino-3-[4-benzyloxy-7-(4-chlorophenylsulfanyl)-3-methoxybicyclo[4.2.0]octa-1,3,5-trien-7-yl]acrylic acid tert-butyl ester 348618-49-5P, 3-Amino-6-benzyloxy-7-methoxynaphthalene-2-carboxylic acid tert-butyl ester 348618-50-8P 348618-51-9P, 3-Amino-6-hydroxy-7-methoxynaphthalene-2-carboxylic acid tert-butyl ester 348618-52-0P 348618-53-1P 348618-54-2P, 8-Hydroxy-7-methoxy-4-oxo-1,4-dihydrobenzo[g]quinoline-3-carbonitrile 348618-55-3P
348618-56-4P 348618-57-5P 348618-59-7P
348618-64-4P 348618-65-5P 348619-44-3P 348619-45-4P
441068-34-4P 441068-35-5P, 3-Amino-3-(4-benzyloxy-3-methoxy-7-phenylsulfanylbicyclo[4.2.0]octa-1,3,5-trien-7-yl)acrylonitrile
441068-36-6P, 3-Amino-6-benzyloxy-7-methoxynaphthalene-2-carbonitrile
441068-38-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; preparation of benzo[g]quinoline-3-carbonitriles and benzo[g]quinazolines as protein kinase inhibitors)

IT 80-41-1, 2-Chloroethyl p-toluene sulfonate 109-01-3, 1-Methylpiperazine 110-91-8, Morpholine, reactions 288-36-8, 1H-1,2,3-Triazole 367-24-8, 4-Bromo-2-fluoroaniline 540-88-5, tert-Butyl acetate 591-19-5, 3-Bromoaniline 622-40-2, 4-(2-Hydroxyethyl)morpholine 632-02-0, 3-Chloropropyl p-toluene sulfonate 882-33-7, Phenyl disulfide 1142-19-4, 4,4'-Dichlorodiphenyl disulfide 4637-24-5, Dimethylformamide dimethyl acetal 33693-48-0, 4-Benzyloxy-3-methoxybenzyl alcohol 98446-49-2, 2,4-Dichloro-5-methoxyaniline 133303-88-5, 3-Chloro-4-[(1-methyl-1H-imidazol-2-yl)sulfanyl]phenylamine 441068-42-4 441068-43-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant; preparation of benzo[g]quinoline-3-carbonitriles and benzo[g]quinazolines as protein kinase inhibitors)

IT 628-13-7, Pyridine hydrochloride 16068-46-5, Potassium phosphate 213697-53-1
RL: RGT (Reagent); RACT (Reactant or reagent)
(reagent; preparation of benzo[g]quinoline-3-carbonitriles and benzo[g]quinazolines as protein kinase inhibitors)

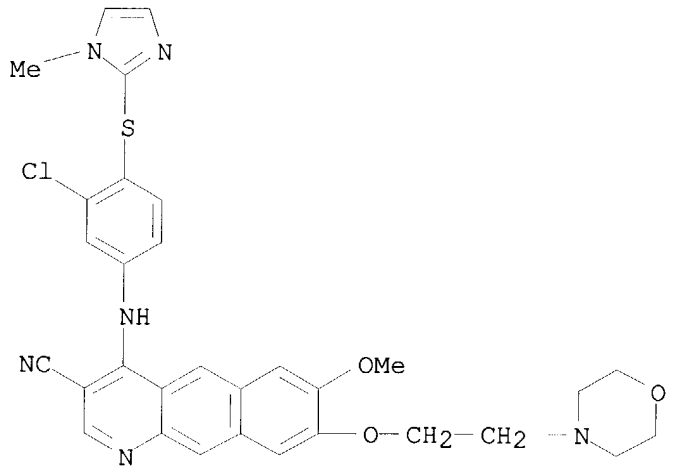
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) American Cyanamid Co; WO 9843960 A 1998 HCAPLUS
(2) American Home Prod; WO 0147892 A 2001 HCAPLUS
(3) Schnur, W; WO 9749688 A 1997 HCAPLUS

IT **348618-58-6P 348618-60-0P 348618-61-1P**
348618-62-2P 348618-63-3P 348618-66-6P
348618-67-7P 348618-68-8P

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(drug candidate; preparation of benzo[g]quinoline-3-carbonitriles and benzo[g]quinazolines as protein kinase inhibitors)

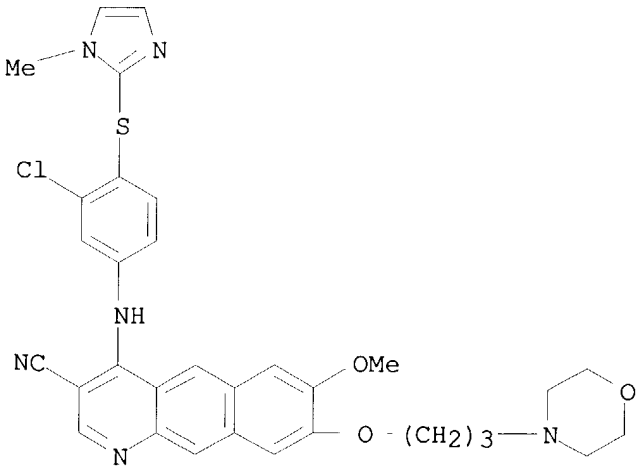
RN 348618-58-6 HCAPLUS

CN Benzo[g]quinoline-3-carbonitrile, 4-[[3-chloro-4-[(1-methyl-1H-imidazol-2-yl)thio]phenyl]amino]-7-methoxy-8-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)



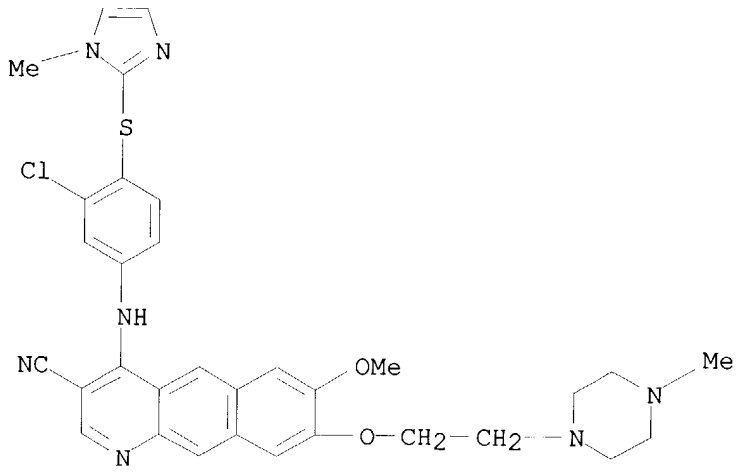
RN 348618-60-0 HCAPLUS

CN Benzo[g]quinoline-3-carbonitrile, 4-[[3-chloro-4-[(1-methyl-1H-imidazol-2-yl)thio]phenyl]amino]-7-methoxy-8-[3-(4-morpholinyl)propoxy]- (9CI) (CA INDEX NAME)

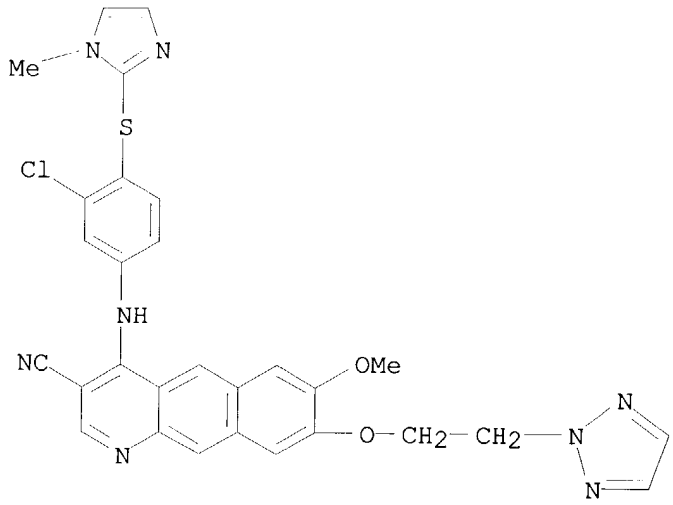


RN 348618-61-1 HCAPLUS

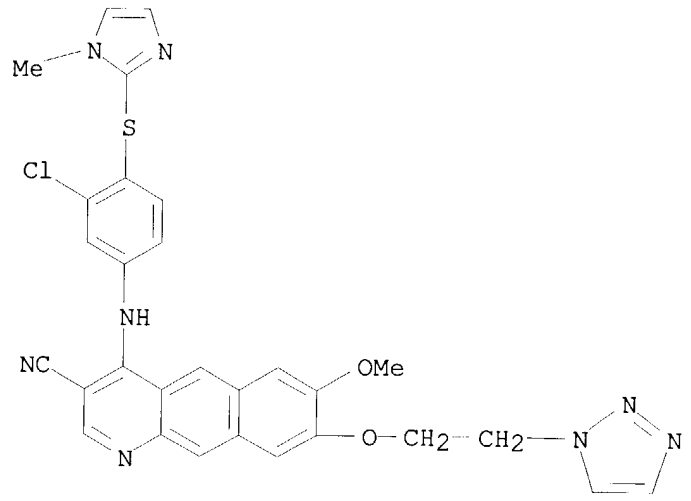
CN Benzo[g]quinoline-3-carbonitrile, 4-[[3-chloro-4-[(1-methyl-1H-imidazol-2-yl)thio]phenyl]amino]-7-methoxy-8-[2-(4-methyl-1-piperazinyl)ethoxy]- (9CI) (CA INDEX NAME)



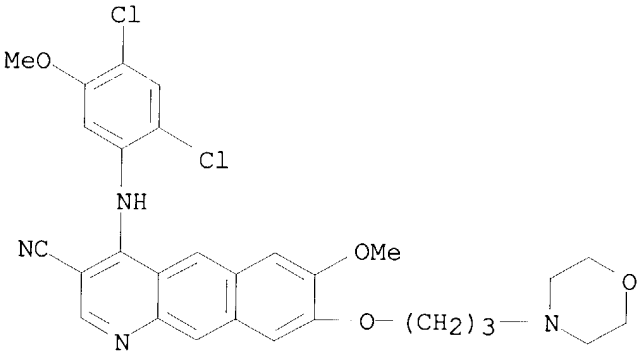
RN 348618-62-2 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[[3-chloro-4-[(1-methyl-1H-imidazol-2-yl)thio]phenyl]amino]-7-methoxy-8-[2-(2H-1,2,3-triazol-2-yl)ethoxy]- (9CI) (CA INDEX NAME)



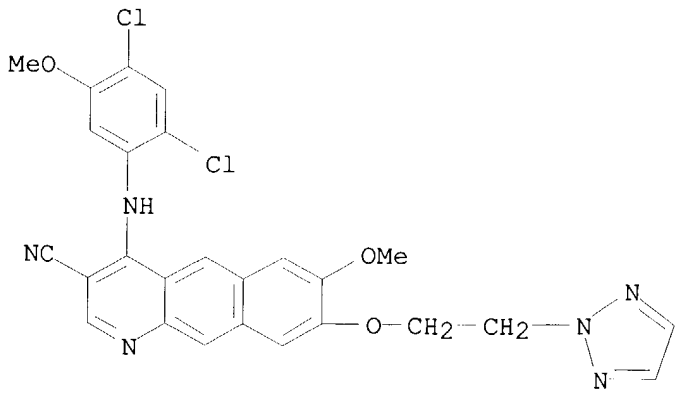
RN 348618-63-3 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[[3-chloro-4-[(1-methyl-1H-imidazol-2-yl)thio]phenyl]amino]-7-methoxy-8-[2-(1H-1,2,3-triazol-1-yl)ethoxy]- (9CI) (CA INDEX NAME)



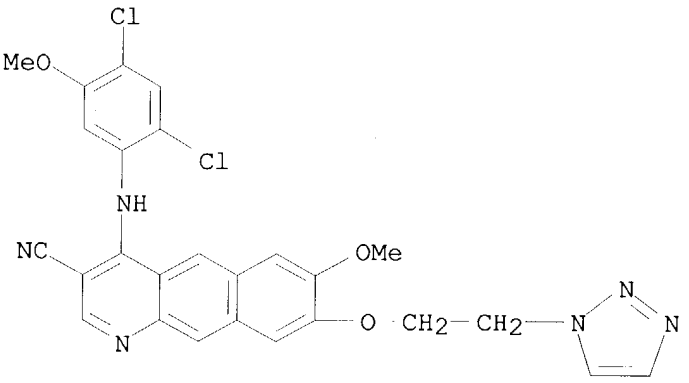
RN 348618-66-6 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichloro-5-methoxyphenyl)amino]-7-methoxy-8-[3-(4-morpholinyl)propoxy]- (9CI) (CA INDEX NAME)



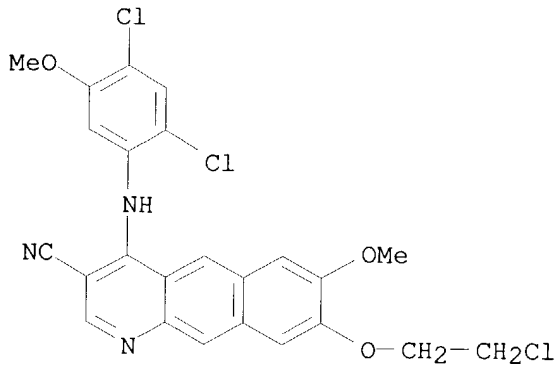
RN 348618-67-7 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichloro-5-methoxyphenyl)amino]-7-methoxy-8-[2-(2H-1,2,3-triazol-2-yl)ethoxy]- (9CI) (CA INDEX NAME)



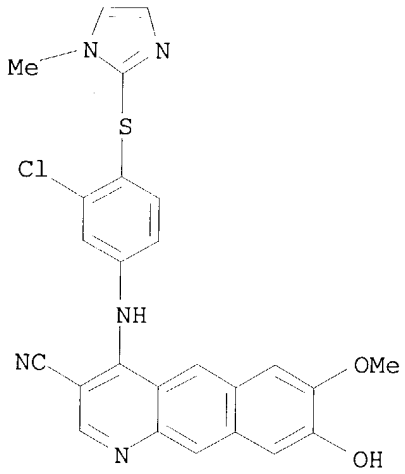
RN 348618-68-8 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichloro-5-methoxyphenyl)amino]-7-methoxy-8-[2-(1H-1,2,3-triazol-1-yl)ethoxy]- (9CI) (CA INDEX NAME)



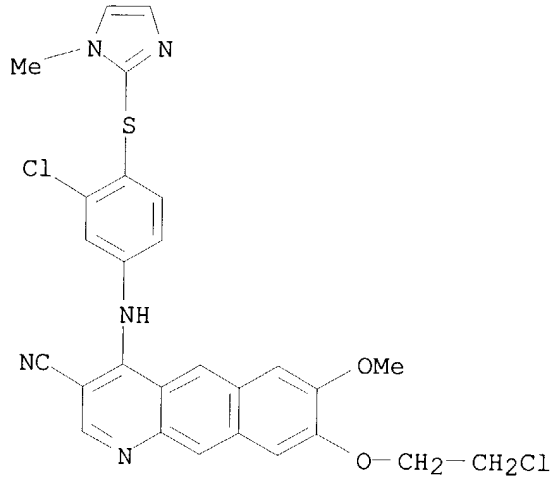
IT **348618-37-1P 348618-56-4P 348618-57-5P**
348618-59-7P 348618-64-4P 348618-65-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; preparation of benzo[g]quinoline-3-carbonitriles and benzo[g]quinazolines as protein kinase inhibitors)
RN 348618-37-1 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 8-(2-chloroethoxy)-4-[(2,4-dichloro-5-methoxyphenyl)amino]-7-methoxy- (9CI) (CA INDEX NAME)



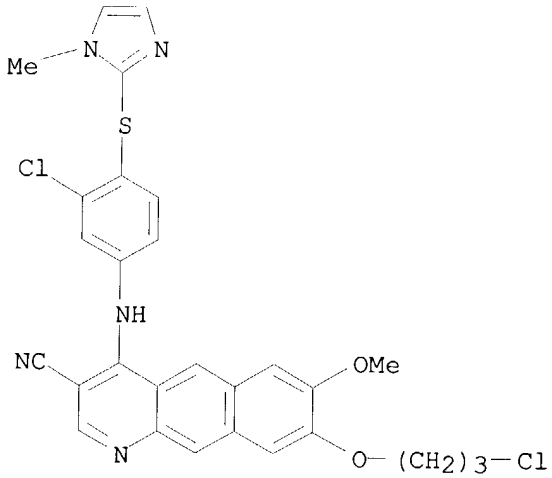
RN 348618-56-4 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[[3-chloro-4-[(1-methyl-1H-imidazol-2-yl)thio]phenyl]amino]-8-hydroxy-7-methoxy- (9CI) (CA INDEX NAME)



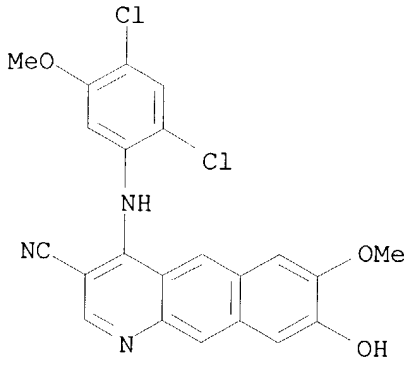
RN 348618-57-5 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 8-(2-chloroethoxy)-4-[[3-chloro-4-[(1-methyl-1H-imidazol-2-yl)thio]phenyl]amino]-7-methoxy- (9CI) (CA INDEX NAME)



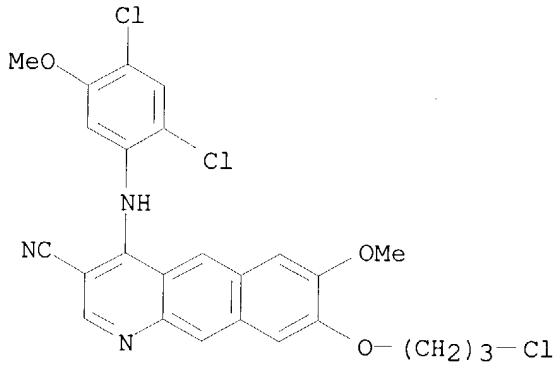
RN 348618-59-7 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[[3-chloro-4-[(1-methyl-1H-imidazol-2-yl)thio]phenyl]amino]-8-(3-chloropropoxy)-7-methoxy- (9CI) (CA INDEX NAME)



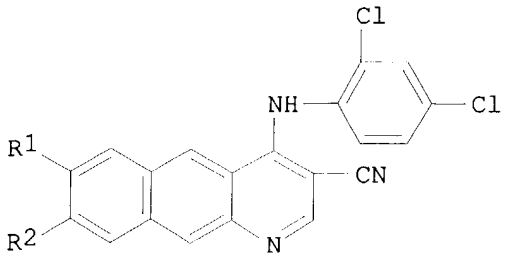
RN 348618-64-4 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichloro-5-methoxyphenyl)amino]-8-hydroxy-7-methoxy- (9CI) (CA INDEX NAME)



RN 348618-65-5 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 8-(3-chloropropoxy)-4-[(2,4-dichloro-5-methoxyphenyl)amino]-7-methoxy- (9CI) (CA INDEX NAME)



L7 ANSWER 7 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:97688 HCAPLUS
DN 137:93676
ED Entered STN: 06 Feb 2002
TI 4-Anilino-3-cyanobenzo[g]quinolines as Kinase Inhibitors
AU Zhang, Nan; Wu, Biqi; Wissner, Allan; Powell, Dennis W.; Rabindran, Sridhar K.; Kohler, Constance; Boschelli, Frank
CS Chemical Sciences, Wyeth-Ayerst Research, Pearl River, NY, 10965, USA
SO Bioorganic & Medicinal Chemistry Letters (2002), 12(3), 423-425
CODEN: BMCLE8; ISSN: 0960-894X
PB Elsevier Science Ltd.
DT Journal
LA English
CC 27-18 (Heterocyclic Compounds (One Hetero Atom))
Section cross-reference(s): 1
GI



I

AB 4-Anilino-3-cyanobenzo[g]quinolines, e.g., I (R1 = R2 = MeO, OH; R1 = MeO, R2 = H; R1 = H, R2 = MeO) were prepared as potent kinase inhibitors. Compared with their bicyclic 4-anilino-3-cyanoquinoline analogs, the tricyclic 4-anilino-3-cyanobenzo[g]quinolines are less active against EGF-R kinase, equally active against MAPK kinase (MEK), and more active against Src kinase. For Src kinase inhibition, the best activity is obtained when both the 7- and 8-positions are substituted with alkoxy groups. Several of these kinase inhibitors show potent growth inhibitory activity in tumor cells.

ST benzoquinolinecarbonitrile anilino prepn kinase inhibitor antitumor agent

IT Antitumor agents
Human
(4-anilinobenzo[g]quinoline-3-carbonitriles as kinase inhibitors)

IT Fibroblast
(cell proliferation; 4-anilinobenzo[g]quinoline-3-carbonitriles as kinase inhibitors)

IT Intestine, neoplasm
(colon, carcinoma; 4-anilinobenzo[g]quinoline-3-carbonitriles as kinase inhibitors)

IT Carcinoma
(squamous cell; 4-anilinobenzo[g]quinoline-3-carbonitriles as kinase inhibitors)

IT 79079-06-4, EGF receptor protein kinase 141349-89-5, Src kinase 142805-58-1, Protein kinase MEK
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(4-anilinobenzo[g]quinoline-3-carbonitriles as kinase inhibitors)

IT 214487-04-4 294175-13-6 331662-50-1 380843-29-8
RL: PAC (Pharmacological activity); BIOL (Biological study)
(4-anilinobenzo[g]quinoline-3-carbonitriles as kinase inhibitors)

IT **348617-27-6P 439912-93-3P 439912-94-4P 439912-95-5P 439912-96-6P 439912-97-7P 439912-98-8P**
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(4-anilinobenzo[g]quinoline-3-carbonitriles as kinase inhibitors)

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD

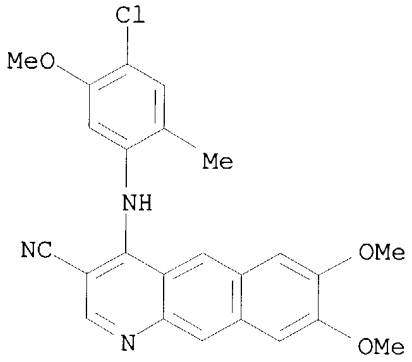
RE

(1) Anon; Unpublished results
(2) Boschelli, D; J Med Chem 2001, V44, P3965 HCAPLUS
(3) Boschelli, D; J Med Chem 2001, V44, P822 HCAPLUS
(4) Brown, F; J Med Chem 1994, V37, P674 HCAPLUS
(5) McOmie, J; Synthesis 1973, V7, P416
(6) Torrance, C; Nat Med 2000, V6, P1024 HCAPLUS
(7) Wang, Y; Bioorg Med Chem Lett 2000, V10, P2477 HCAPLUS
(8) Wissner, A; J Med Chem 2000, V43, P3244 HCAPLUS
(9) Zhang, N; Bioorg Med Chem Lett 2000, V10, P2825 HCAPLUS

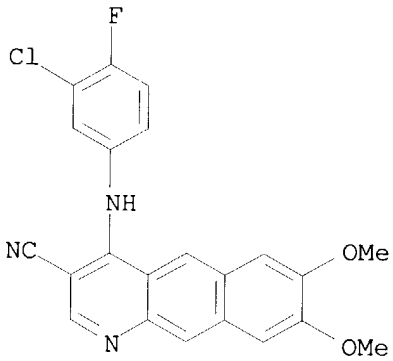
(10) Zhang, N; Bioorg Med Chem Lett 2001, V11, P1407 HCAPLUS
(11) Zhang, N; Frontiers of Biotechnology & Pharmaceuticals 2000, V1, P305 HCAPLUS

IT **348617-27-6P 439912-93-3P 439912-94-4P 439912-95-5P 439912-96-6P 439912-97-7P 439912-98-8P**
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(4-anilinobenzo[g]quinoline-3-carbonitriles as kinase inhibitors)

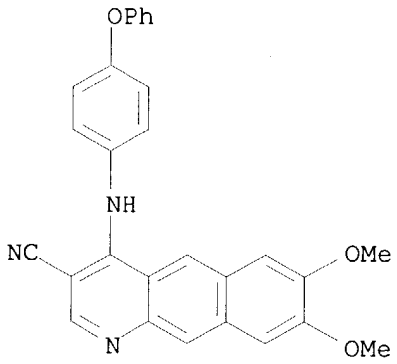
RN 348617-27-6 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(4-chloro-5-methoxy-2-methylphenyl)amino]-7,8-dimethoxy- (9CI) (CA INDEX NAME)



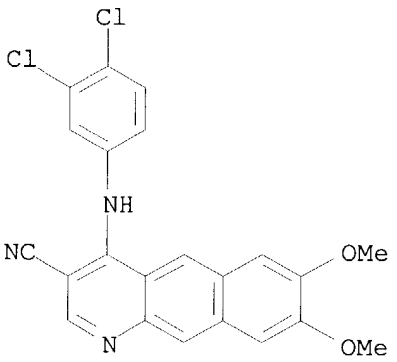
RN 439912-93-3 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(3-chloro-4-fluorophenyl)amino]-7,8-dimethoxy- (9CI) (CA INDEX NAME)



RN 439912-94-4 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 7,8-dimethoxy-4-[(4-phenoxyphenyl)amino]- (9CI) (CA INDEX NAME)



RN 439912-95-5 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(3,4-dichlorophenyl)amino]-7,8-dimethoxy- (9CI) (CA INDEX NAME)



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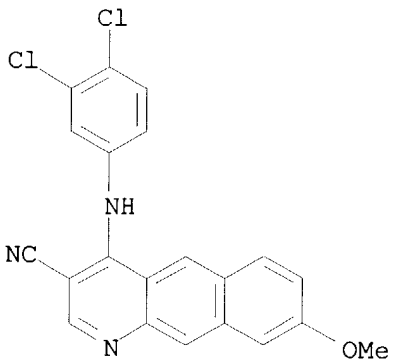
CN Benzo[g]quinoline-3-carbonitrile, 4-[(3,4-dichlorophenyl)amino]-8-methoxy- (9CI) (CA INDEX NAME)



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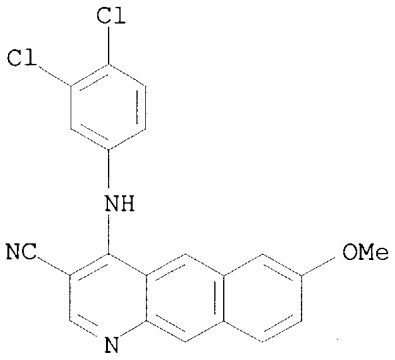
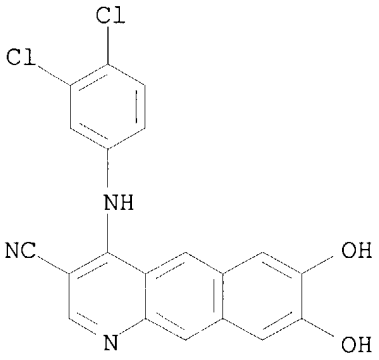
CN Benzo[g]quinoline-3-carbonitrile, 4-[(3,4-dichlorophenyl)amino]-7-methoxy- (9CI) (CA INDEX NAME)



RN 439912-98-8 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(3,4-dichlorophenyl)amino]-7,8-dihydroxy- (9CI) (CA INDEX NAME)



L7 ANSWER 8 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:906207 HCAPLUS
DN 136:37618
ED Entered STN: 16 Dec 2001
TI Preparation of substituted aromatic tricyclic compounds containing nicotinonitrile rings as protein kinase inhibitors
IN Berger, Dan M.; Dutia, Minu D.; Demorin, Frenel F.; Boschelli, Diane H.; Powell, Dennis W.; Tsou, Hwei-ru; Wissner, Allan; Zhang, Nan; Ye, Fei; Wu, Biqi
PA American Home Products Corporation, USA; Wyeth
SO U.S. Pat. Appl. Publ., 107 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM A61K031-5377
ICS A61K031-496; A61K031-4738; C07D491-02
NCL 514232800
CC 28-13 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 1
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

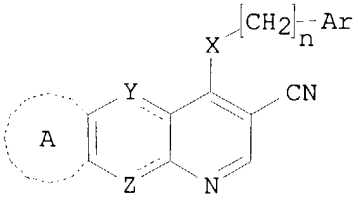
PI	US 2001051620	A1	20011213	US 2000-751274	20001229
	US 6638929	B2	20031028		
	US 2004110762	A1	20040610	US 2003-618044	20030710
PRAI	US 1999-240905P	P	19991229		
	US 2000-751274	A3	20001229		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2001051620	ICM	A61K031-5377
	ICS	A61K031-496; A61K031-4738; C07D491-02
	NCL	514232800
US 2001051620	ECLA	C07D215/48; C07D221/08; C07D401/12; C07D401/12; C07D401/14; C07D047/04; C07D471/04; C07D471/04; C07D471/04; C07D491/04; C07D495/04; C07D513/04
US 2004110762	ECLA	C07D215/48; C07D221/08; C07D401/12; C07D401/12; C07D401/14; C07D047/04; C07D471/04; C07D471/04; C07D471/04; C07D491/04; C07D495/04; C07D513/04

OS MARPAT 136:37618

GI



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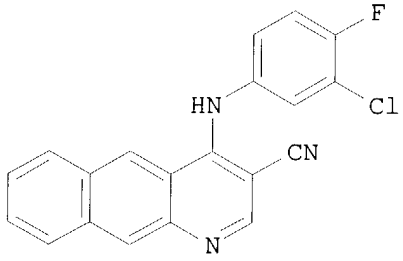

II

AB The title compds. I [Ar = (un)substituted cycloalkyl, pyridyl, pyrimidinyl, etc.; n = 0-1; X = NH, O, S, NR; R = alkyl; Y, Z = both carbon or N; A = (un)substituted benzo, pyrido, pyrimido, etc.] which are useful as inhibitors of protein tyrosine kinase and are antiproliferative agents, were prepared E.g., a 3-step synthesis of II which showed IC50 of 0.005 μM against EGF-R kinase (recombinant enzyme), was given.

ST arom tricyclic compd prepn protein kinase inhibitor; EGF receptor kinase inhibitor arom tricyclic compd prepn; antitumor arom tricyclic compd prepn; KDR kinase inhibitor arom tricyclic compd prepn; mitogen activated protein kinase inhibitor arom tricyclic compd prepn; src kinase inhibitor arom tricyclic compd prepn

IT Antitumor agents

(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile rings as protein kinase inhibitors)

IT 79079-06-4, EGF receptor kinase 139691-76-2, Raf kinase 141349-89-5, Src kinase 142243-02-5, Mitogen activated protein kinase 150977-45-0
RL: BSU (Biological study, unclassified); BIOL (Biological study)

(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile rings as protein kinase inhibitors)

IT 263149-40-2P **348617-29-8P** 348617-39-0P 348617-40-3P 348617-42-5P 348617-43-6P 348617-45-8P 348617-60-7P

348617-61-8P 348617-63-0P 348617-64-1P 348617-89-0P
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348618-38-2P 348618-46-2P 348618-50-8P 348618-53-1P
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348618-64-4P 348618-65-5P 348618-81-5P
348619-28-3P
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile
rings as protein kinase inhibitors)

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348618-47-3P **348618-58-6P 348618-60-0P**
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RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile
rings as protein kinase inhibitors)

IT 79-10-7, Acrylic acid, reactions 90-05-1, Guaiacol 94-05-3, Ethyl (ethoxymethylene))cyanoacetate 105-34-0, Methyl cyanoacetate 108-01-0, 2-(Dimethylamino)ethanol 109-01-3, 1-Methylpiperazine 110-91-8, Morpholine, reactions 139-59-3, 4-Phenoxyaniline 288-36-8, 1H-1,2,3-Triazole 348-62-9, 4-Chloro-2-fluorophenol 367-21-5, 3-Chloro-4-fluoroaniline 504-88-1, 3-Nitropropionic acid 540-88-5,

tert-Butyl acetate 554-00-7, 2,4-Dichloroaniline 591-19-5, 3-Bromoaniline 622-40-2, 4-(2-Hydroxyethyl)morpholine 632-02-0, 3-Chloropropyl p-toluenesulfonate 814-68-6, Acryloyl chloride 873-38-1, 2-Bromo-4-chloroaniline 882-33-7, Phenyl disulfide 1142-19-4, 4,4'-Dichlorodiphenyl disulfide 2038-03-1, 4-(2-Aminoethyl)morpholine 2835-95-2, 5-Amino-o-cresol 4637-24-5 5335-29-5, 3-Chloro-4-phenoxyaniline 5959-52-4, 3-Amino-2-naphthoic acid 20357-25-9, 6-Nitroveratraldehyde 24313-88-0, 3,4,5-Trimethoxyaniline 33693-48-0, 4-Benzyloxy-3-methoxybenzyl alcohol 34674-75-4 35212-85-2, Methyl 3-aminobenzo[b]thiophene-2-carboxylate 39786-35-1, Ethyl 3-amino-2-benzo[b]furancarboxylate 43073-44-5, 6,7-Dimethoxy-2,3-naphthalenedicarboxylic anhydride 50868-72-9, 5-Methoxy-2-methylaniline 57946-56-2, 4-Chloro-2-fluoroaniline 59404-86-3, 4-Benzyloxy-3-chloroaniline 59922-33-7 62492-42-6 63224-35-1 76513-69-4, 2-(Trimethylsilyl)ethoxymethyl chloride 76878-17-6 85006-21-9, 2-Chloro-5-methoxyaniline hydrochloride 98404-04-7, 2-Chloro-4-fluoro-5-methoxyaniline 98446-49-2, 2,4-Dichloro-5-methoxyaniline 131775-97-8 133088-44-5 133303-88-5 204915-71-9, 4-(2-Chloroethoxy)-3-methoxybenzaldehyde 348619-47-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile
rings as protein kinase inhibitors)

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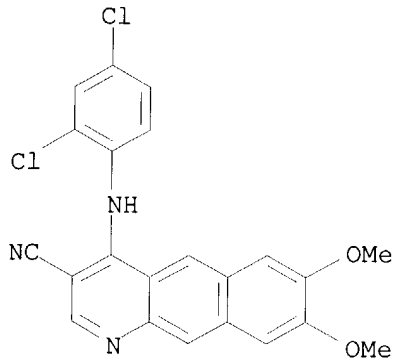
348619-45-4P 348619-46-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile
rings as protein kinase inhibitors)

IT **348617-29-8P 348617-61-8P 348618-16-6P**
348618-17-7P 348618-18-8P 348618-33-7P
348618-34-8P 348618-37-1P 348618-38-2P
348618-56-4P 348618-57-5P 348618-59-7P
348618-64-4P 348618-65-5P 348619-28-3P
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile
rings as protein kinase inhibitors)

RN 348617-29-8 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichlorophenyl)amino]-7,8-dimethoxy- (9CI) (CA INDEX NAME)



RN 348617-61-8 HCAPLUS
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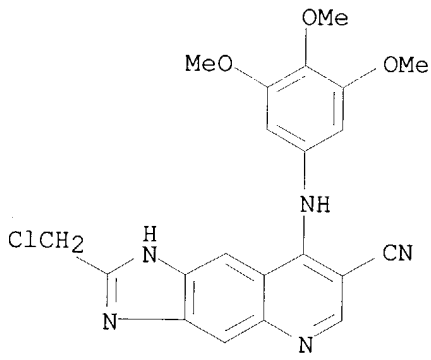

RN 348618-16-6 HCAPLUS
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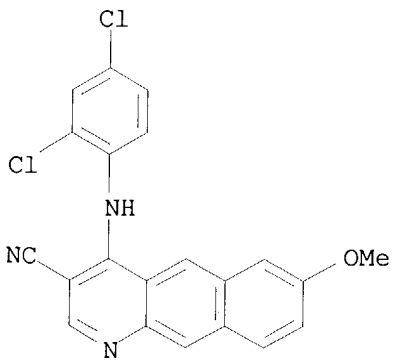

RN 348618-17-7 HCAPLUS
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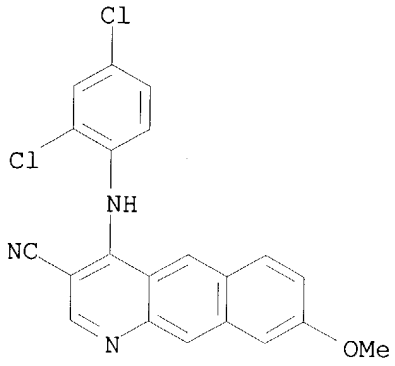

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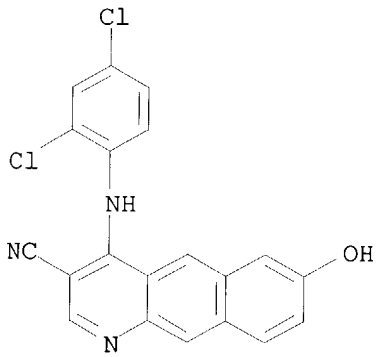

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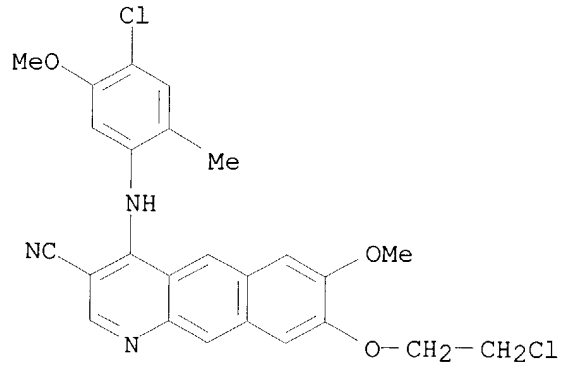

RN 348618-34-8 HCAPLUS
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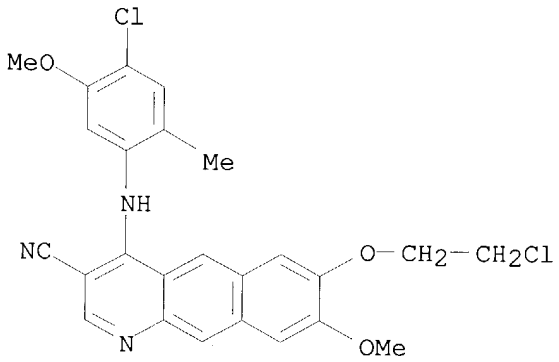

RN 348618-37-1 HCAPLUS
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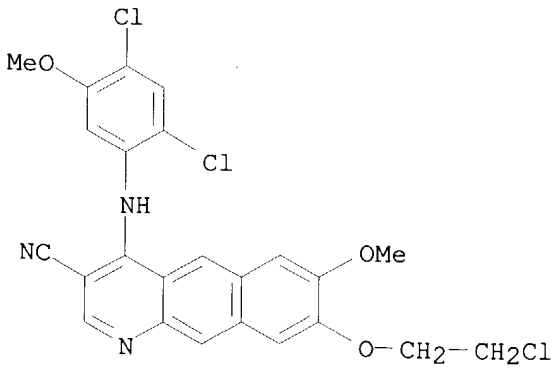

RN 348618-38-2 HCAPLUS
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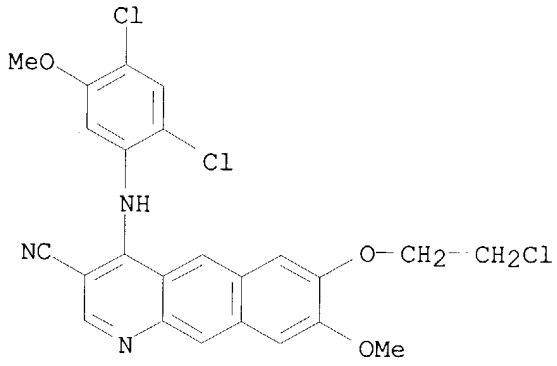
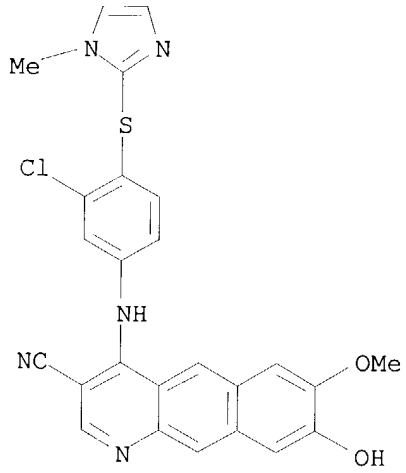


RN 348618-56-4 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[[3-chloro-4-[(1-methyl-1H-imidazol-2-yl)thio]phenyl]amino]-8-hydroxy-7-methoxy- (9CI) (CA INDEX NAME)



RN 348618-57-5 HCAPLUS
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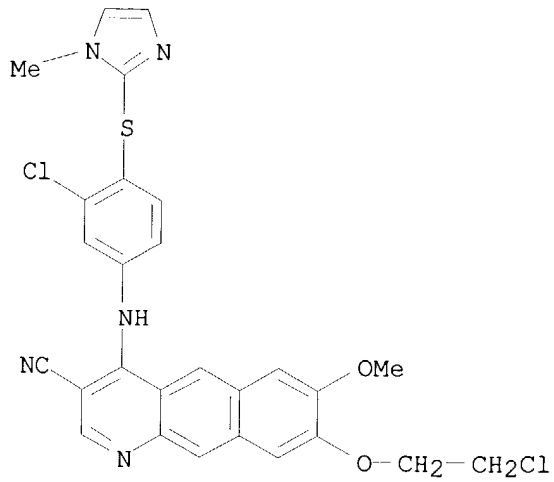
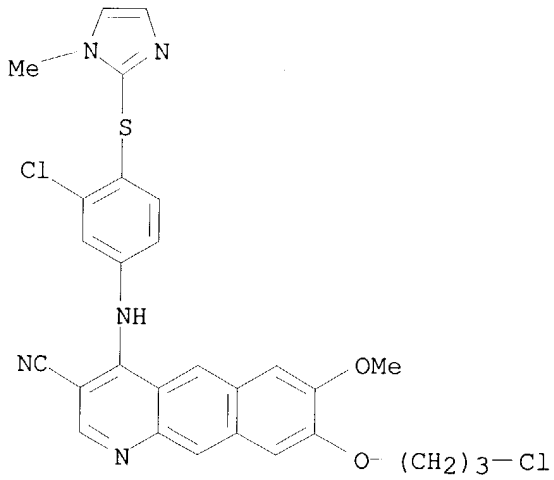


RN 348618-59-7 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[[3-chloro-4-[(1-methyl-1H-imidazol-2-yl)thio]phenyl]amino]-8-(3-chloropropoxy)-7-methoxy- (9CI) (CA INDEX NAME)



RN 348618-64-4 HCAPLUS
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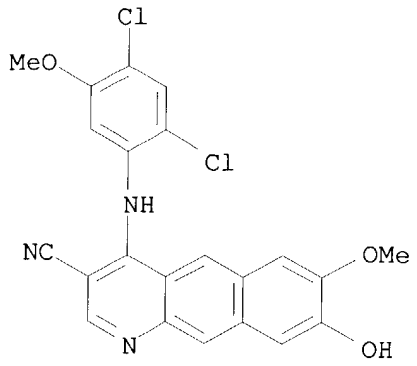
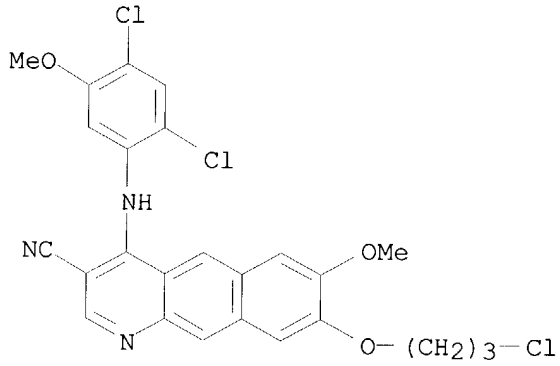
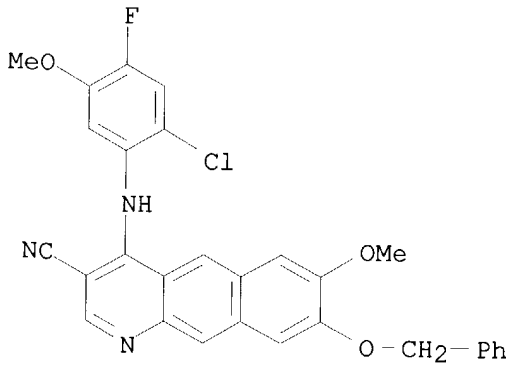


RN 348618-65-5 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 8-(3-chloropropoxy)-4-[(2,4-dichloro-5-methoxyphenyl)amino]-7-methoxy- (9CI) (CA INDEX NAME)



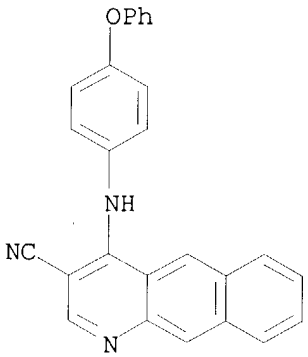
RN 348619-28-3 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2-chloro-4-fluoro-5-methoxyphenyl)amino]-7-methoxy-8-(phenylmethoxy)- (9CI) (CA INDEX NAME)



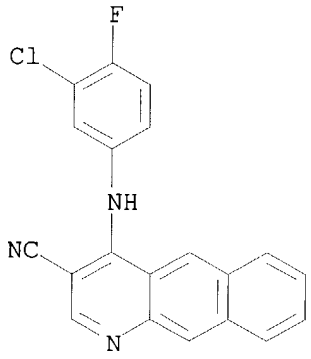
IT **348617-17-4P 348617-19-6P 348617-20-9P**
348617-26-5P 348617-27-6P 348617-28-7P
348617-30-1P 348617-38-9P 348617-41-4P

348617-44-7P 348617-46-9P 348617-47-0P
348617-50-5P 348617-51-6P 348617-52-7P
348617-54-9P 348617-55-0P 348617-56-1P
348617-58-3P 348617-62-9P 348617-71-0P
348617-72-1P 348617-75-4P 348618-19-9P
348618-20-2P 348618-35-9P 348618-36-0P
348618-39-3P 348618-40-6P 348618-41-7P
348618-42-8P 348618-43-9P 348618-44-0P
348618-58-6P 348618-60-0P 348618-61-1P
348618-62-2P 348618-63-3P 348618-66-6P
348618-67-7P 348618-68-8P 348618-88-2P
348618-89-3P 348618-90-6P 348618-91-7P
348618-92-8P 348618-93-9P 348618-94-0P
348618-95-1P 348618-96-2P 348618-97-3P
348618-98-4P 348618-99-5P 348619-00-1P
348619-01-2P 348619-02-3P 348619-03-4P
348619-04-5P 348619-05-6P 348619-06-7P
348619-07-8P 348619-08-9P 348619-09-0P
348619-10-3P 348619-11-4P 348619-12-5P
348619-13-6P 348619-14-7P 348619-15-8P
348619-16-9P 348619-17-0P 348619-18-1P
348619-19-2P 348619-20-5P 348619-21-6P
348619-22-7P 348619-23-8P 348619-24-9P
348619-25-0P 348619-26-1P 348619-27-2P
348619-29-4P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile
rings as protein kinase inhibitors)

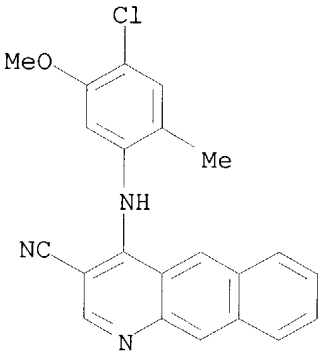
RN 348617-17-4 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(4-phenoxyphenyl)amino]- (9CI) (CA INDEX NAME)



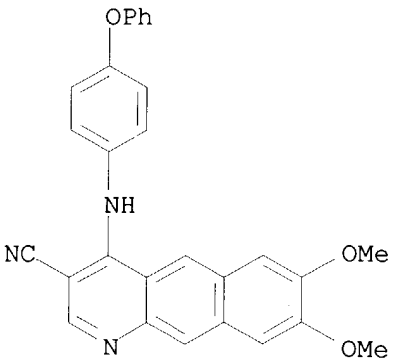
RN 348617-19-6 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(3-chloro-4-fluorophenyl)amino]- (9CI) (CA INDEX NAME)



RN 348617-20-9 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(4-chloro-5-methoxy-2-methylphenyl)amino]- (9CI) (CA INDEX NAME)

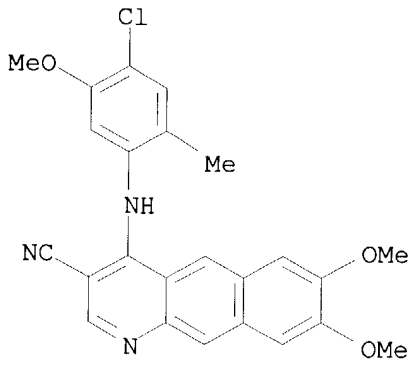


RN 348617-26-5 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 7,8-dimethoxy-4-[(4-phenoxyphenyl)amino]-, dihydrochloride (9CI) (CA INDEX NAME)

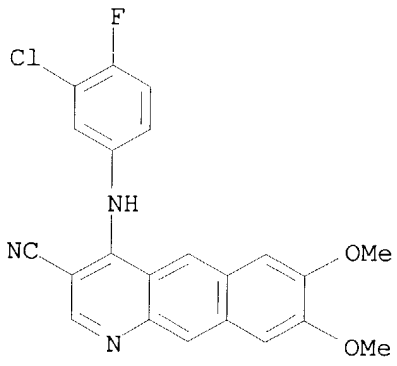


●2 HCl

RN 348617-27-6 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(4-chloro-5-methoxy-2-methylphenyl)amino]-7,8-dimethoxy- (9CI) (CA INDEX NAME)

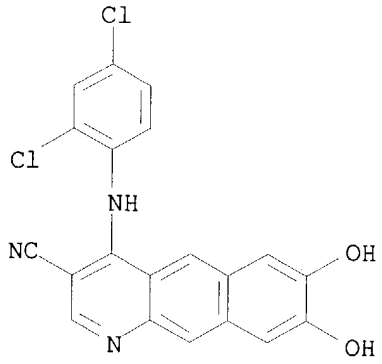


RN 348617-28-7 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(3-chloro-4-fluorophenyl)amino]-7,8-dimethoxy-, monohydrochloride (9CI) (CA INDEX NAME)

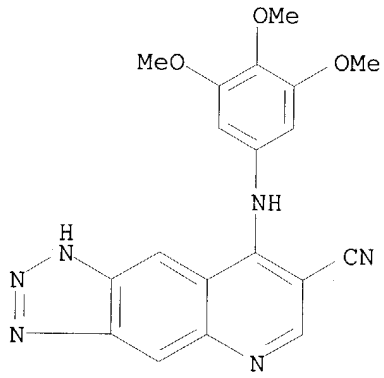


● HCl

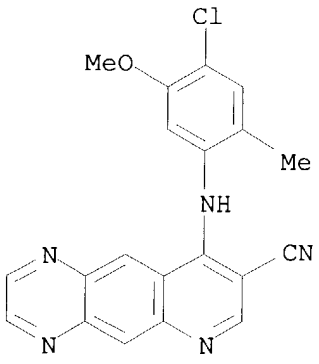
RN 348617-30-1 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichlorophenyl)amino]-7,8-dihydroxy- (9CI) (CA INDEX NAME)



RN 348617-38-9 HCAPLUS
CN 1H-1,2,3-Triazolo[4,5-g]quinoline-7-carbonitrile, 8-[(3,4,5-trimethoxyphenyl)amino]- (9CI) (CA INDEX NAME)

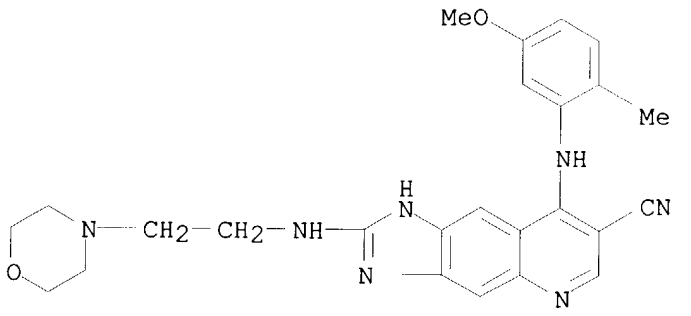


RN 348617-41-4 HCAPLUS
CN Pyrido[2,3-g]quinoxaline-8-carbonitrile, 9-[(4-chloro-5-methoxy-2-methylphenyl)amino]- (9CI) (CA INDEX NAME)

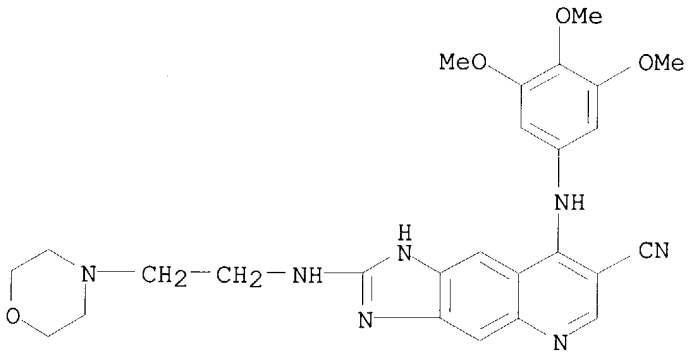


RN 348617-44-7 HCAPLUS
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(5-methoxy-2-methylphenyl)amino]-2-[[2-(4-morpholinyl)ethyl]amino]- (9CI) (CA INDEX

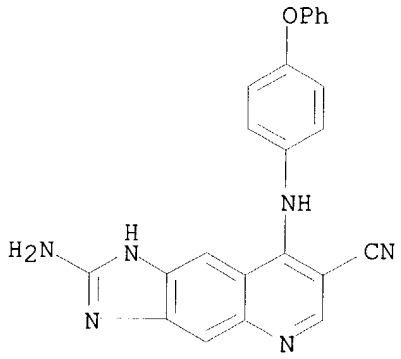
NAME)



RN 348617-46-9 HCAPLUS
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 2-[[2-(4-morpholinyl)ethyl]amino]-8-[(3,4,5-trimethoxyphenyl)amino]- (9CI) (CA INDEX NAME)

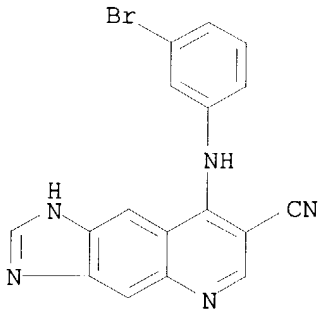


RN 348617-47-0 HCAPLUS
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 2-amino-8-[(4-phenoxyphenyl)amino]-, monohydrochloride (9CI) (CA INDEX NAME)

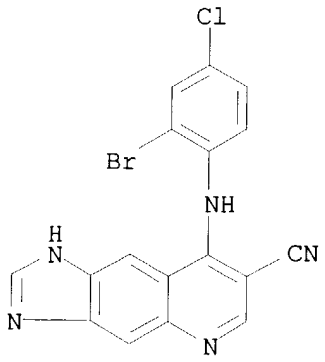


● HCl

RN 348617-50-5 HCAPLUS
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(3-bromophenyl)amino]- (9CI) (CA INDEX NAME)

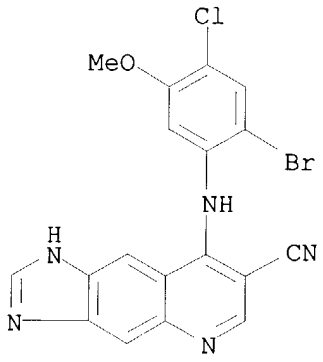


RN 348617-51-6 HCAPLUS
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(2-bromo-4-chlorophenyl)amino]- (9CI) (CA INDEX NAME)

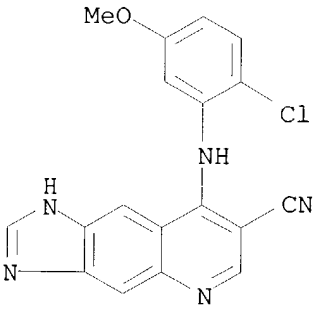


RN 348617-52-7 HCAPLUS

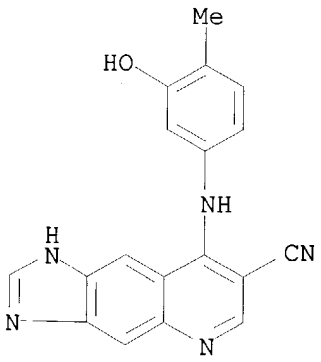
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(2-bromo-4-chloro-5-methoxyphenyl)amino]- (9CI) (CA INDEX NAME)



RN 348617-54-9 HCAPLUS
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(2-chloro-5-methoxyphenyl)amino]- (9CI) (CA INDEX NAME)

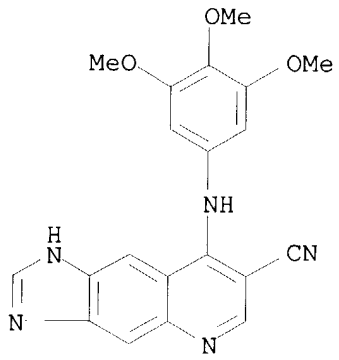


RN 348617-55-0 HCAPLUS
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(3-hydroxy-4-methylphenyl)amino]- (9CI) (CA INDEX NAME)

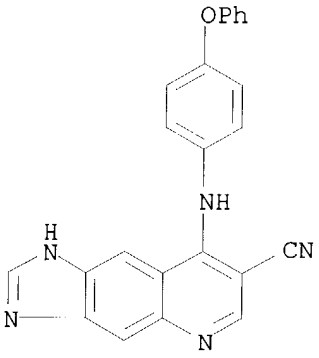


RN 348617-56-1 HCAPLUS
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(3,4,5-

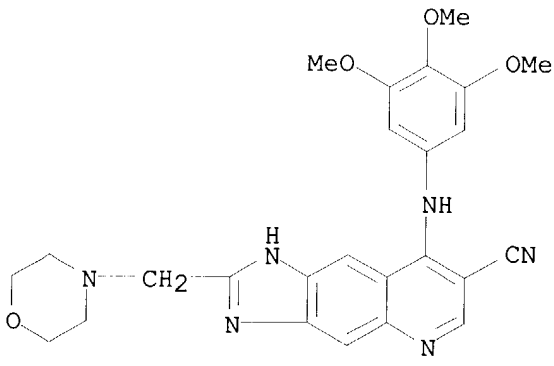
trimethoxyphenyl)amino]- (9CI) (CA INDEX NAME)



RN 348617-58-3 HCAPLUS
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(4-phenoxyphenyl)amino]- (9CI) (CA INDEX NAME)

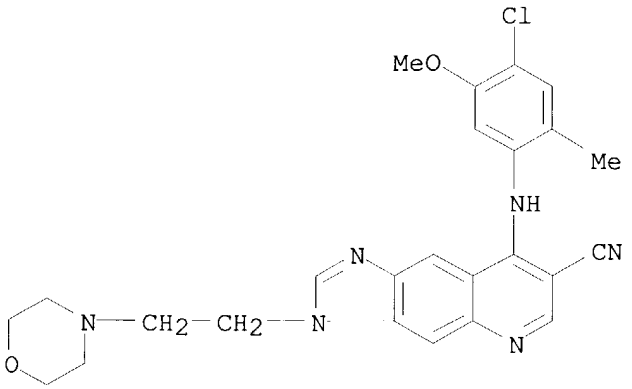


RN 348617-62-9 HCAPLUS
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 2-(4-morpholinylmethyl)-8-[(3,4,5-trimethoxyphenyl)amino]- (9CI) (CA INDEX NAME)

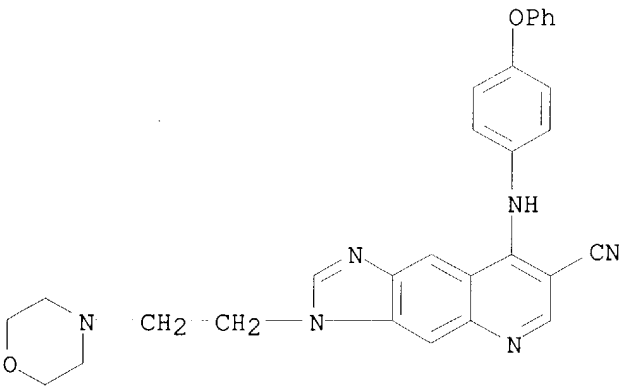


RN 348617-71-0 HCAPLUS

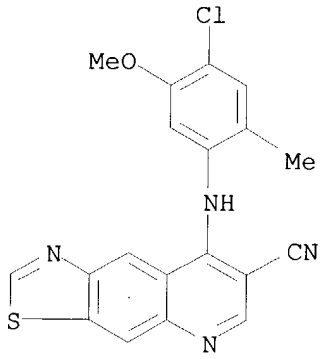
CN 3H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(4-chloro-5-methoxy-2-methylphenyl)amino]-3-[2-(4-morpholinyl)ethyl]- (9CI) (CA INDEX NAME)



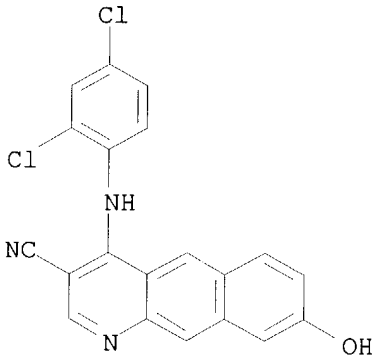
RN 348617-72-1 HCAPLUS
CN 3H-Imidazo[4,5-g]quinoline-7-carbonitrile, 3-[2-(4-morpholinyl)ethyl]-8-[(4-phenoxyphenyl)amino]- (9CI) (CA INDEX NAME)



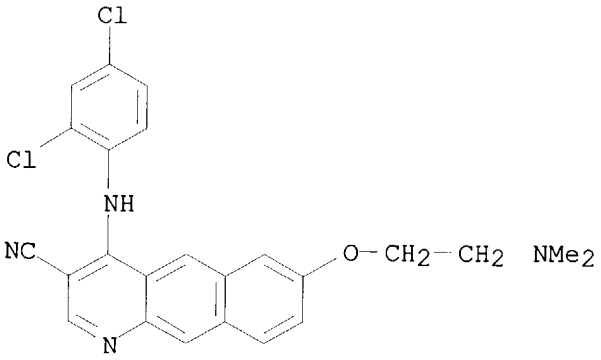
RN 348617-75-4 HCAPLUS
CN Thiazolo[4,5-g]quinoline-7-carbonitrile, 8-[(4-chloro-5-methoxy-2-methylphenyl)amino]- (9CI) (CA INDEX NAME)



RN 348618-19-9 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichlorophenyl)amino]-8-hydroxy- (9CI) (CA INDEX NAME)

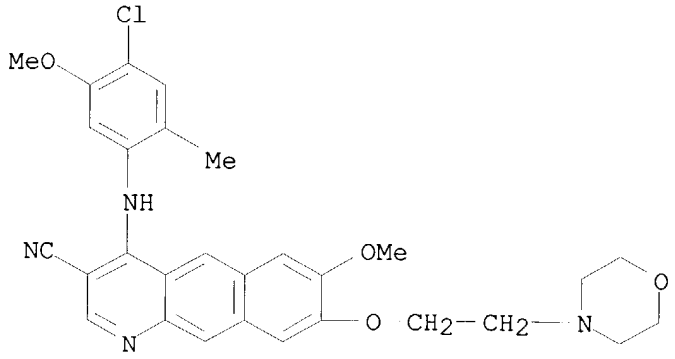


RN 348618-20-2 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichlorophenyl)amino]-7-[2-(dimethylamino)ethoxy]- (9CI) (CA INDEX NAME)

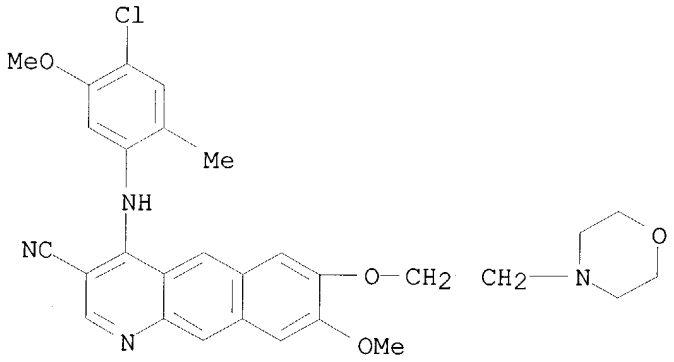


RN 348618-35-9 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(4-chloro-5-methoxy-2-methylphenyl)amino]-7-methoxy-8-[2-(4-morpholinyl)ethoxy]- (9CI) (CA

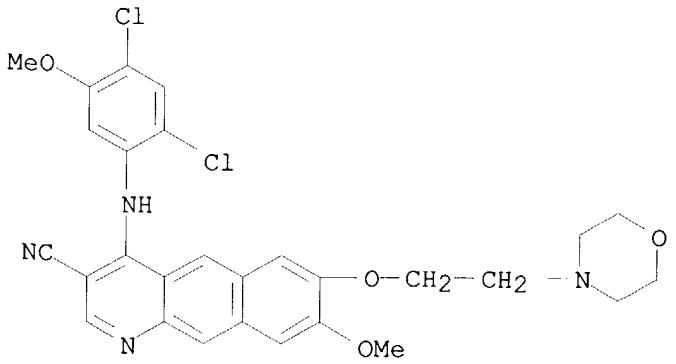
INDEX NAME)



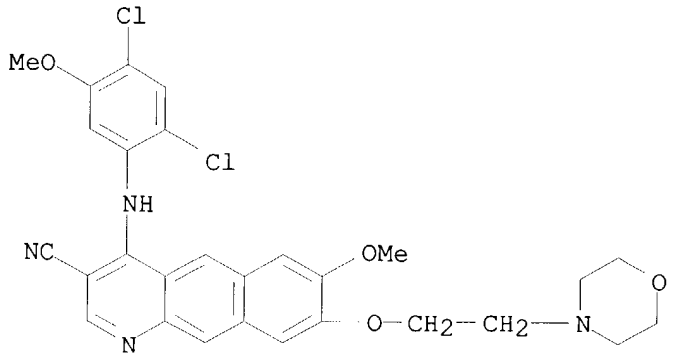
RN 348618-36-0 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(4-chloro-5-methoxy-2-methylphenyl)amino]-8-methoxy-7-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)



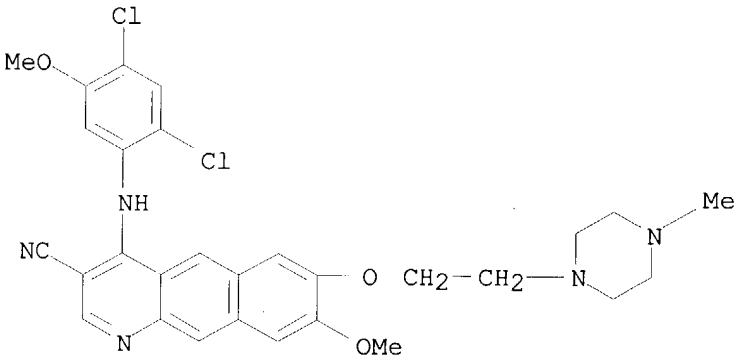
RN 348618-39-3 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichloro-5-methoxyphenyl)amino]-8-methoxy-7-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)



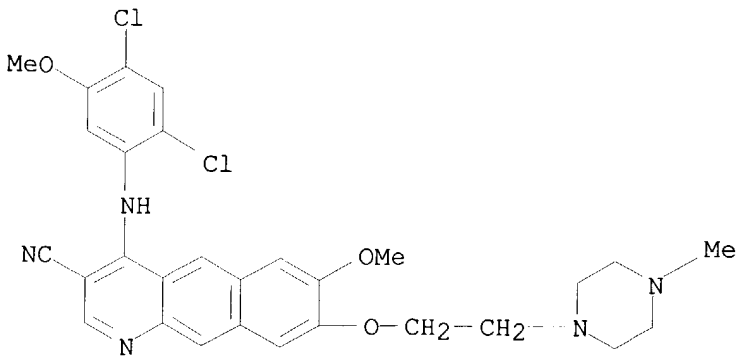
RN 348618-40-6 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichloro-5-methoxyphenyl)amino]-7-methoxy-8-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)



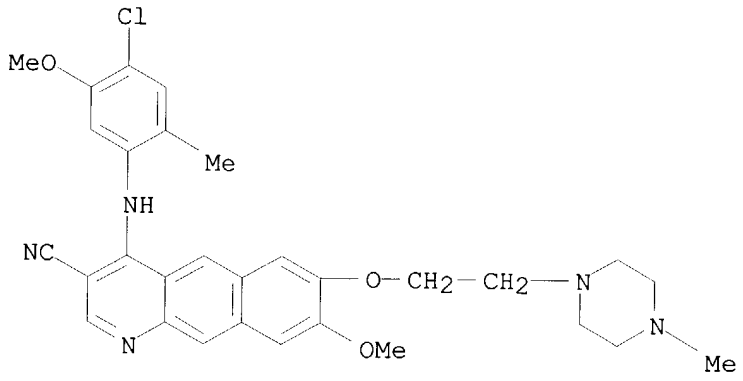
RN 348618-41-7 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichloro-5-methoxyphenyl)amino]-8-methoxy-7-[2-(4-methyl-1-piperazinyl)ethoxy]- (9CI) (CA INDEX NAME)



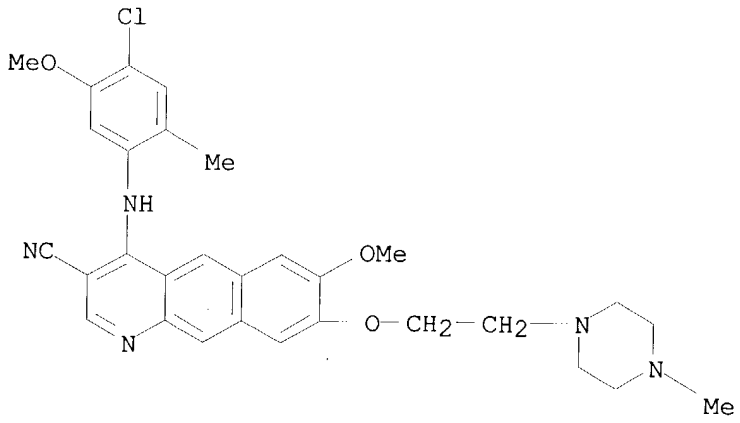
RN 348618-42-8 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichloro-5-methoxyphenyl)amino]-7-methoxy-8-[2-(4-methyl-1-piperazinyl)ethoxy]- (9CI) (CA INDEX NAME)



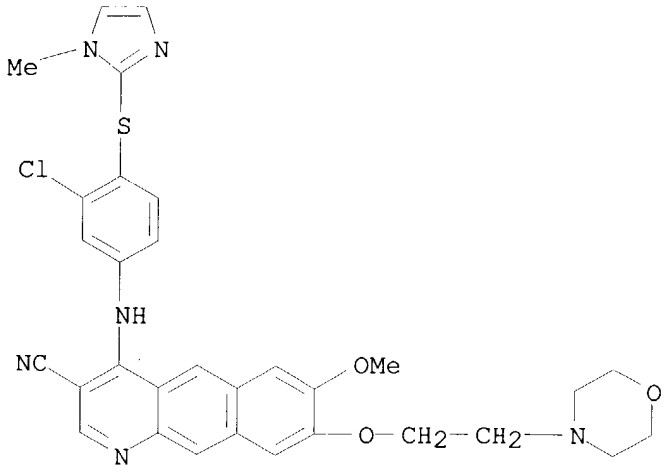
RN 348618-43-9 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(4-chloro-5-methoxy-2-methylphenyl)amino]-8-methoxy-7-[2-(4-methyl-1-piperazinyl)ethoxy]- (9CI) (CA INDEX NAME)



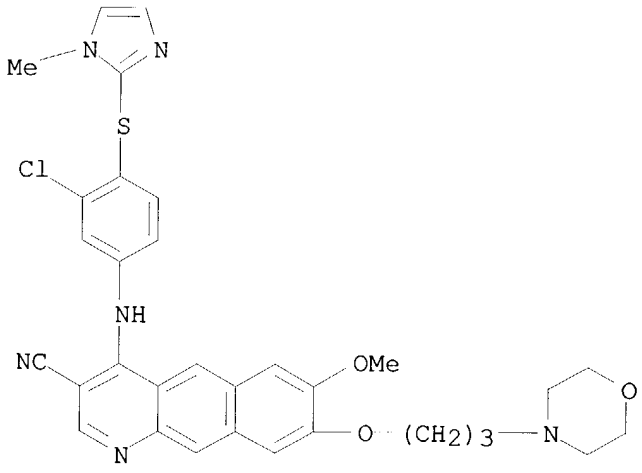
RN 348618-44-0 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(4-chloro-5-methoxy-2-methylphenyl)amino]-7-methoxy-8-[2-(4-methyl-1-piperazinyl)ethoxy]- (9CI) (CA INDEX NAME)



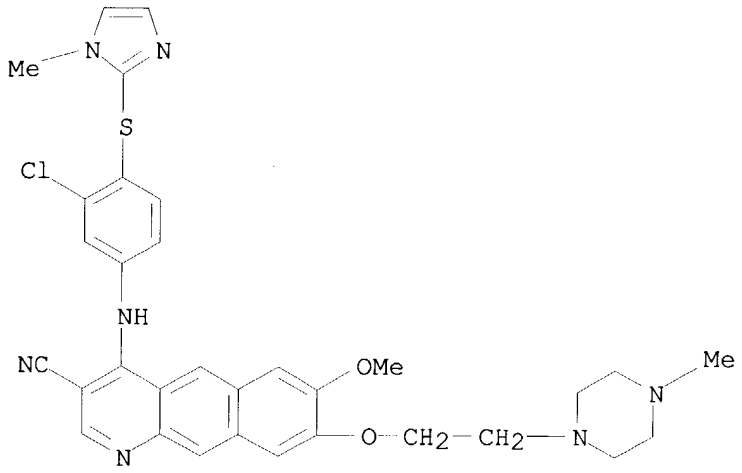
RN 348618-58-6 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[[3-chloro-4-[(1-methyl-1H-imidazol-2-yl)thio]phenyl]amino]-7-methoxy-8-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)



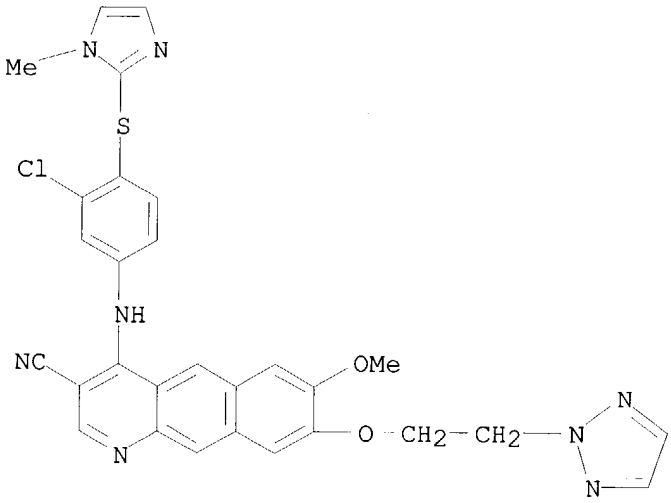
RN 348618-60-0 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[[3-chloro-4-[(1-methyl-1H-imidazol-2-yl)thio]phenyl]amino]-7-methoxy-8-[3-(4-morpholinyl)propoxy]- (9CI) (CA INDEX NAME)



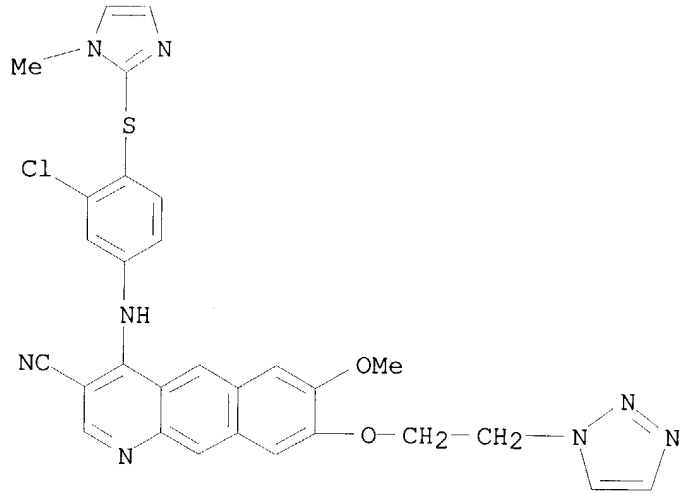
RN 348618-61-1 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[[3-chloro-4-[(1-methyl-1H-imidazol-2-yl)thio]phenyl]amino]-7-methoxy-8-[2-(4-methyl-1-piperazinyl)ethoxy]- (9CI) (CA INDEX NAME)



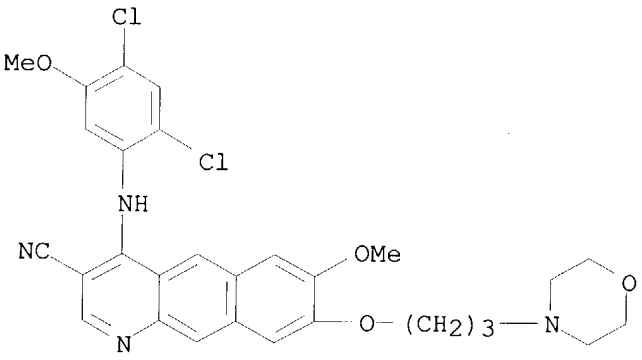
RN 348618-62-2 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[[3-chloro-4-[(1-methyl-1H-imidazol-2-yl)thio]phenyl]amino]-7-methoxy-8-[2-(2H-1,2,3-triazol-2-yl)ethoxy]- (9CI) (CA INDEX NAME)



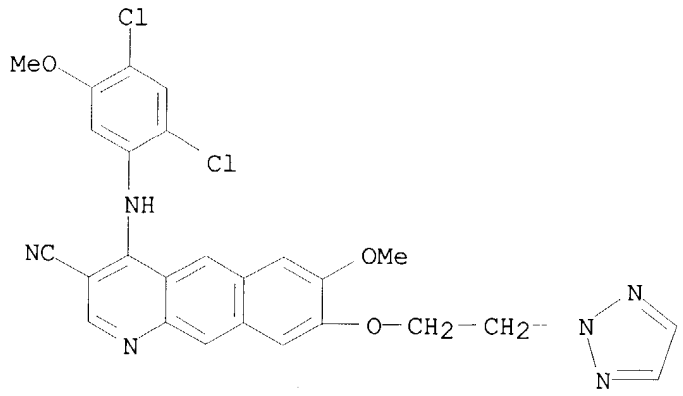
RN 348618-63-3 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[[3-chloro-4-[(1-methyl-1H-imidazol-2-yl)thio]phenyl]amino]-7-methoxy-8-[2-(1H-1,2,3-triazol-1-yl)ethoxy]- (9CI) (CA INDEX NAME)



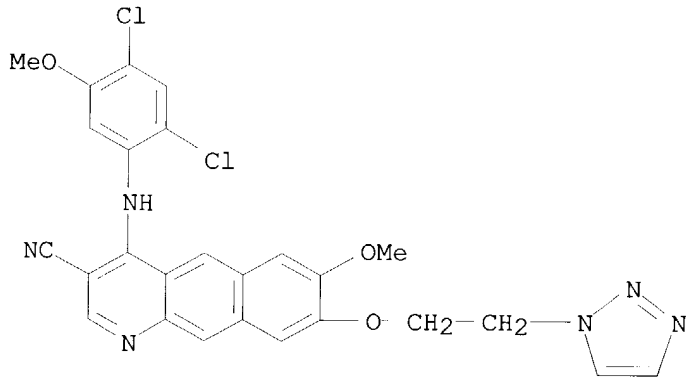
RN 348618-66-6 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichloro-5-methoxyphenyl)amino]-7-methoxy-8-[3-(4-morpholinyl)propoxy]- (9CI) (CA INDEX NAME)



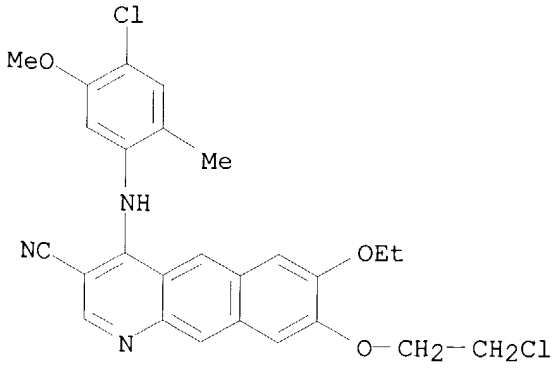
RN 348618-67-7 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichloro-5-methoxyphenyl)amino]-7-methoxy-8-[2-(2H-1,2,3-triazol-2-yl)ethoxy]- (9CI) (CA INDEX NAME)



RN 348618-68-8 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichloro-5-methoxyphenyl)amino]-7-methoxy-8-[2-(1H-1,2,3-triazol-1-yl)ethoxy]- (9CI) (CA INDEX NAME)

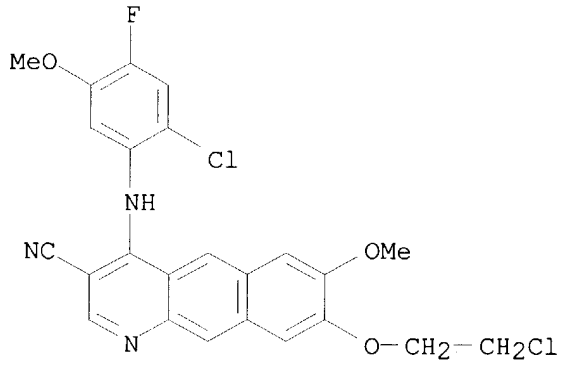


RN 348618-88-2 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 8-(2-chloroethoxy)-4-[(4-chloro-5-methoxy-2-methylphenyl)amino]-7-ethoxy- (9CI) (CA INDEX NAME)

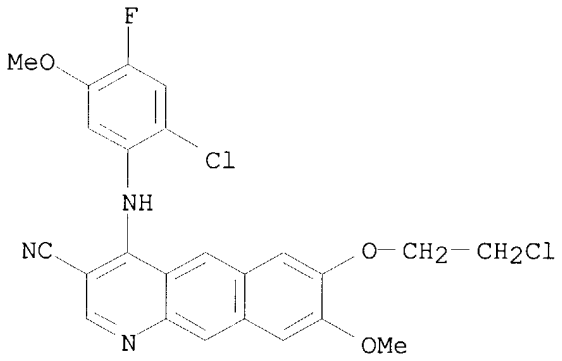


RN 348618-89-3 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 8-(2-chloroethoxy)-4-[(2-chloro-4-fluoro-

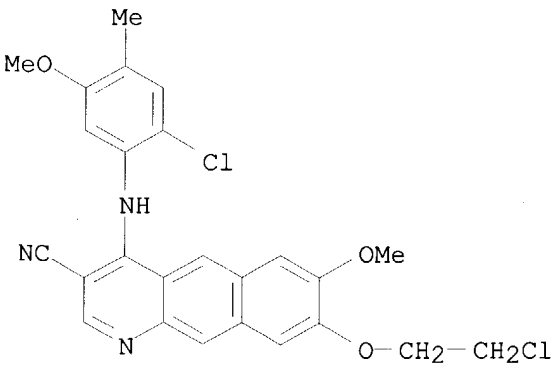
5-methoxyphenyl)amino]-7-methoxy- (9CI) (CA INDEX NAME)



RN 348618-90-6 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 7-(2-chloroethoxy)-4-[(2-chloro-4-fluoro-5-methoxyphenyl)amino]-8-methoxy- (9CI) (CA INDEX NAME)

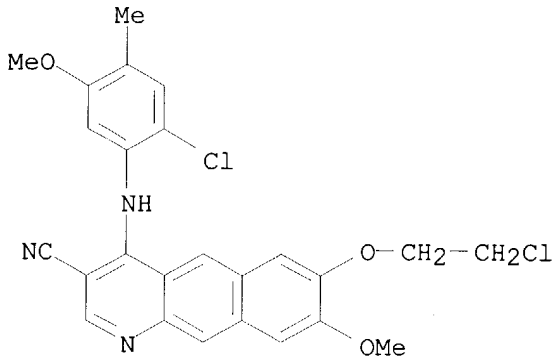


RN 348618-91-7 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 8-(2-chloroethoxy)-4-[(2-chloro-5-methoxy-4-methylphenyl)amino]-7-methoxy- (9CI) (CA INDEX NAME)

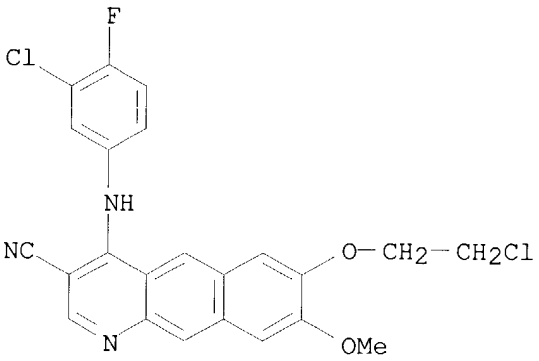


RN 348618-92-8 HCAPLUS

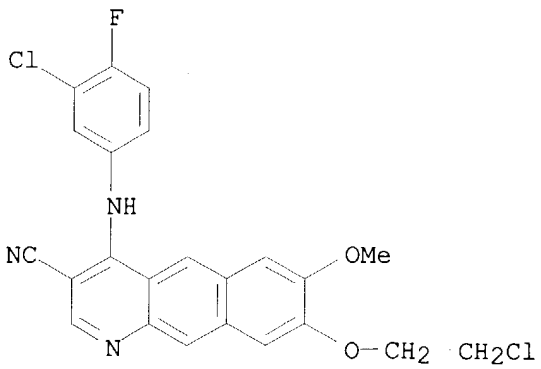
CN Benzo[g]quinoline-3-carbonitrile, 7-(2-chloroethoxy)-4-[(2-chloro-5-methoxy-4-methylphenyl)amino]-8-methoxy- (9CI) (CA INDEX NAME)



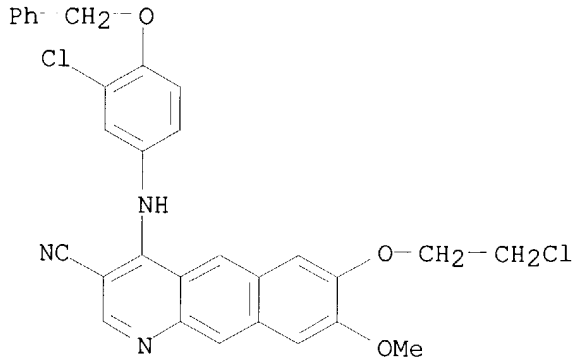
RN 348618-93-9 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 7-(2-chloroethoxy)-4-[(3-chloro-4-fluorophenyl)amino]-8-methoxy- (9CI) (CA INDEX NAME)



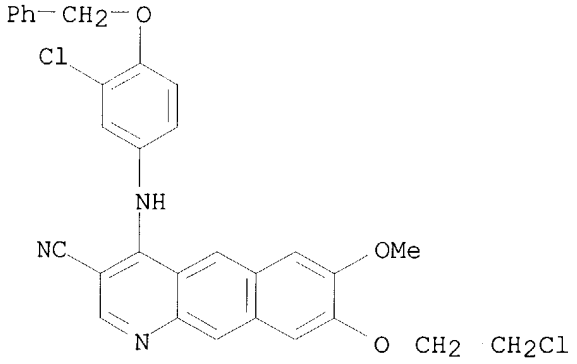
RN 348618-94-0 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 8-(2-chloroethoxy)-4-[(3-chloro-4-fluorophenyl)amino]-7-methoxy- (9CI) (CA INDEX NAME)



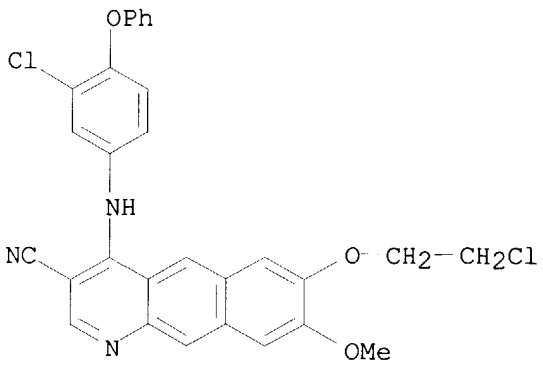
RN 348618-95-1 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 7-(2-chloroethoxy)-4-[[3-chloro-4-(phenylmethoxy)phenyl]amino]-8-methoxy- (9CI) (CA INDEX NAME)



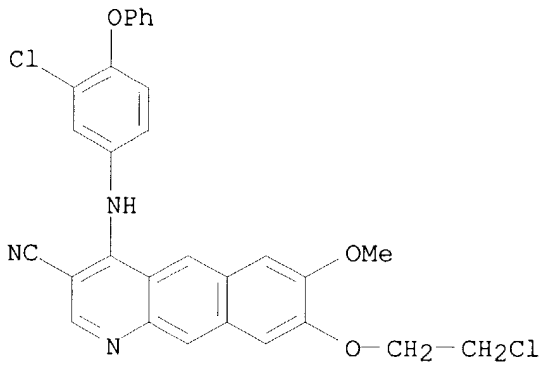
RN 348618-96-2 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 8-(2-chloroethoxy)-4-[[3-chloro-4-(phenylmethoxy)phenyl]amino]-7-methoxy- (9CI) (CA INDEX NAME)



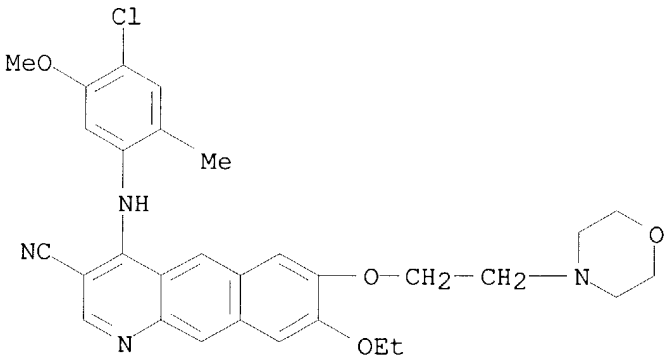
RN 348618-97-3 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 7-(2-chloroethoxy)-4-[(3-chloro-4-phenoxyphenyl)amino]-8-methoxy- (9CI) (CA INDEX NAME)



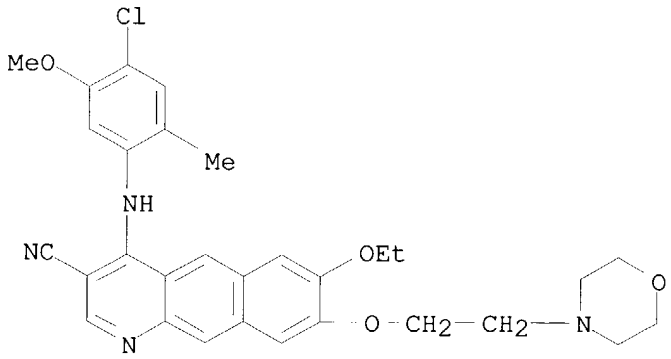
RN 348618-98-4 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 8-(2-chloroethoxy)-4-[(3-chloro-4-phenoxyphenyl)amino]-7-methoxy- (9CI) (CA INDEX NAME)



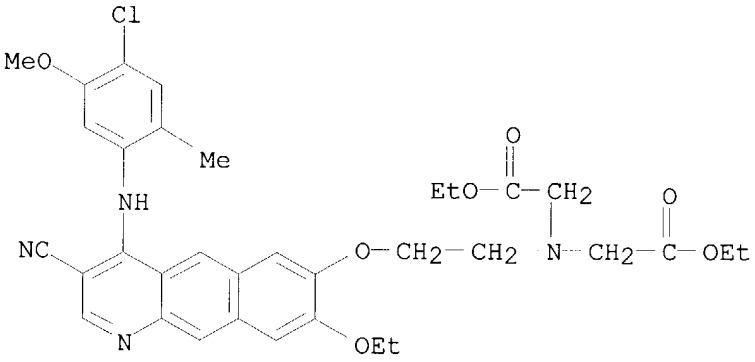
RN 348618-99-5 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(4-chloro-5-methoxy-2-methylphenyl)amino]-8-ethoxy-7-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)



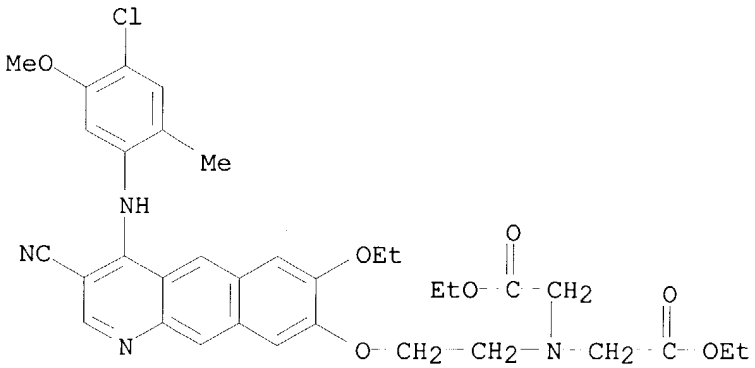
RN 348619-00-1 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(4-chloro-5-methoxy-2-methylphenyl)amino]-7-ethoxy-8-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)



RN 348619-01-2 HCAPLUS
CN Glycine, N-[2-[[4-[(4-chloro-5-methoxy-2-methylphenyl)amino]-3-cyano-8-ethoxybenzo[g]quinolin-7-yl]oxy]ethyl]-N-(2-ethoxy-2-oxoethyl)-, ethyl ester (9CI) (CA INDEX NAME)

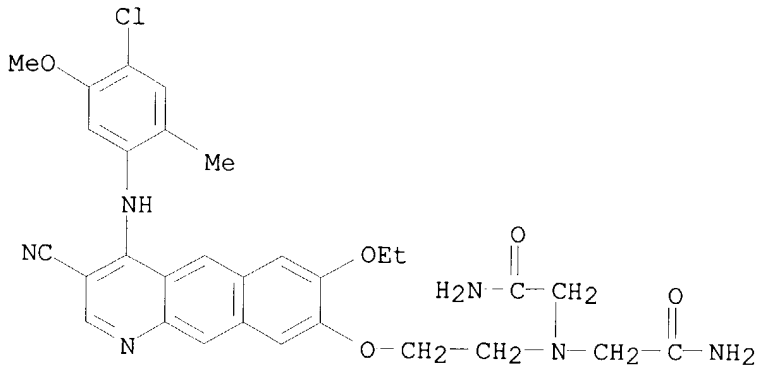


RN 348619-02-3 HCAPLUS
CN Glycine, N-[2-[[4-[(4-chloro-5-methoxy-2-methylphenyl)amino]-3-cyano-7-ethoxybenzo[g]quinolin-8-yl]oxy]ethyl]-N-(2-ethoxy-2-oxoethyl)-, ethyl ester (9CI) (CA INDEX NAME)

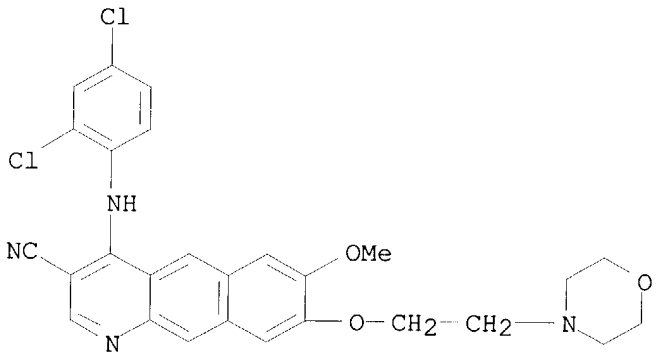


RN 348619-03-4 HCAPLUS

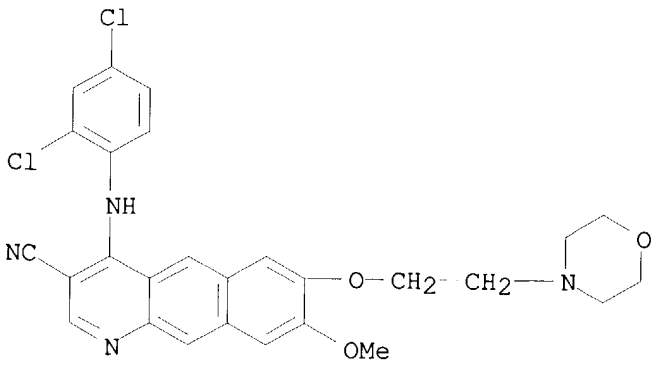
CN Acetamide, 2,2'-[[2-[[4-[(4-chloro-5-methoxy-2-methylphenyl)amino]-3-cyano-7-ethoxybenzo[g]quinolin-8-yl]oxy]ethyl]imino]bis- (9CI) (CA INDEX NAME)



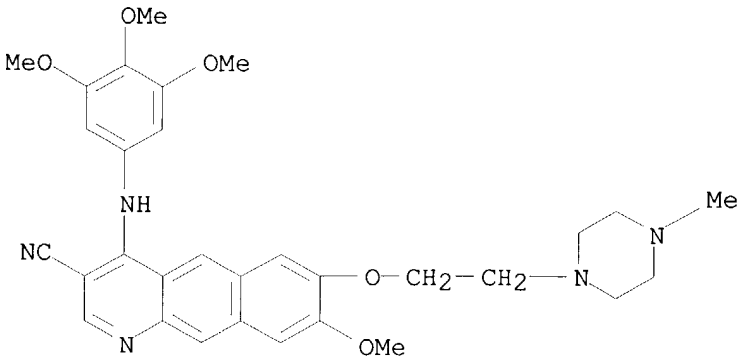
RN 348619-04-5 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichlorophenyl)amino]-7-methoxy-8-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)



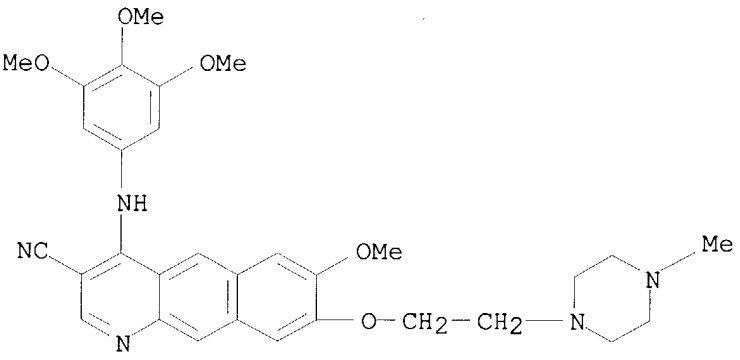
RN 348619-05-6 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichlorophenyl)amino]-8-methoxy-7-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)



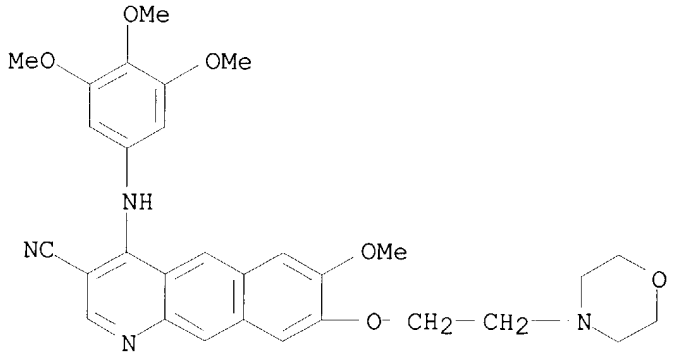
RN 348619-06-7 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 8-methoxy-7-[2-(4-methyl-1-piperazinyl)ethoxy]-4-[(3,4,5-trimethoxyphenyl)amino]- (9CI) (CA INDEX NAME)



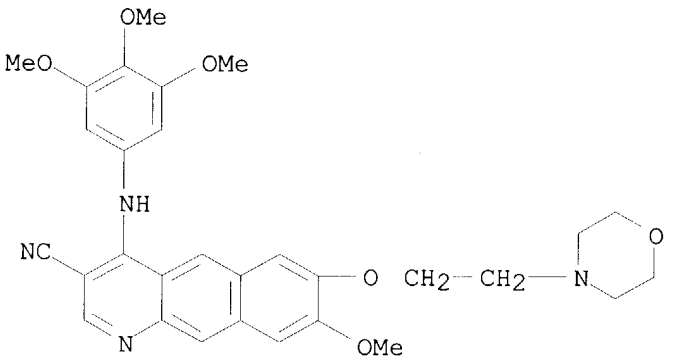
RN 348619-07-8 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 7-methoxy-8-[2-(4-methyl-1-piperazinyl)ethoxy]-4-[(3,4,5-trimethoxyphenyl)amino]- (9CI) (CA INDEX NAME)



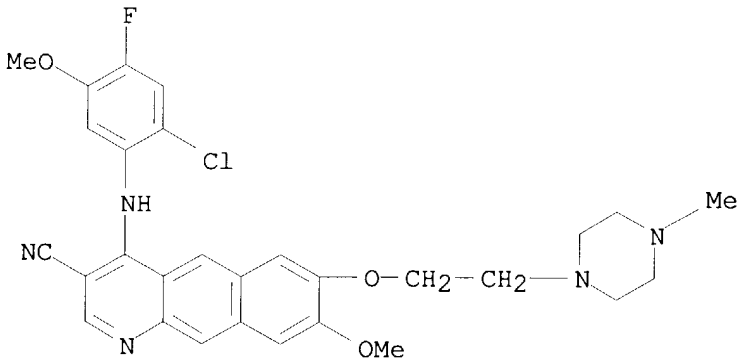
RN 348619-08-9 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 7-methoxy-8-[2-(4-morpholinyl)ethoxy]-4-[(3,4,5-trimethoxyphenyl)amino]- (9CI) (CA INDEX NAME)



RN 348619-09-0 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 8-methoxy-7-[2-(4-morpholinyl)ethoxy]-4-[(3,4,5-trimethoxyphenyl)amino]- (9CI) (CA INDEX NAME)

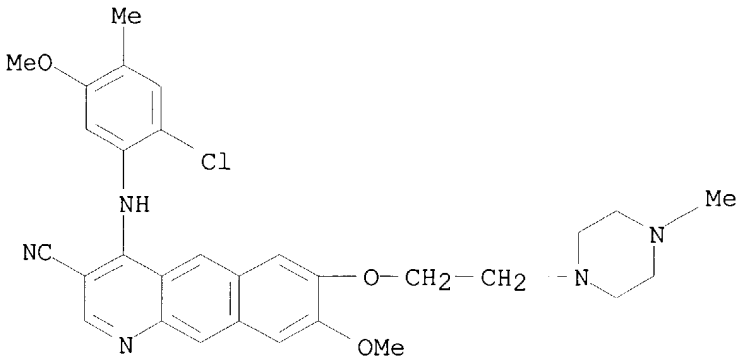


RN 348619-10-3 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2-chloro-4-fluoro-5-methoxyphenyl)amino]-8-methoxy-7-[2-(4-methyl-1-piperazinyl)ethoxy]- (9CI) (CA INDEX NAME)

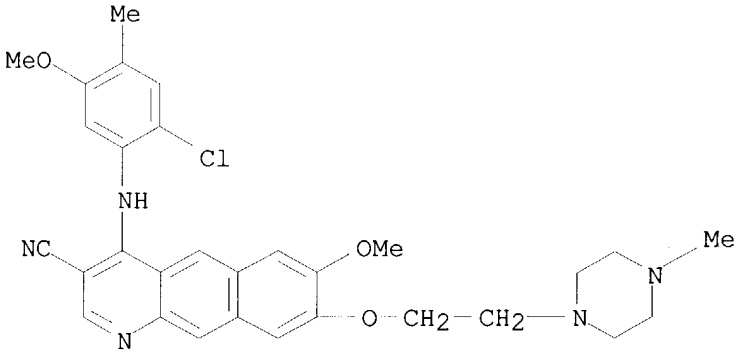


RN 348619-11-4 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2-chloro-5-methoxy-4-

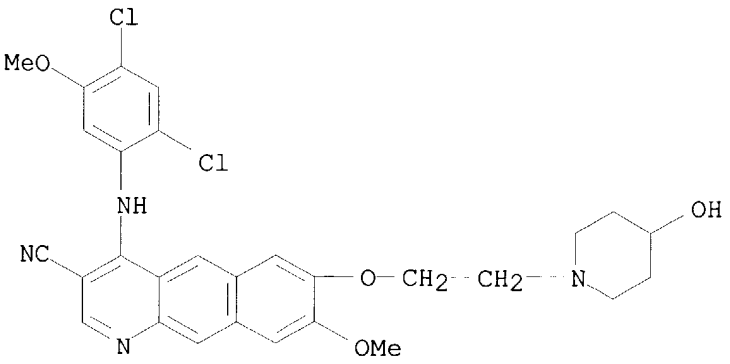
methylphenyl)amino]-8-methoxy-7-[2-(4-methyl-1-piperazinyl)ethoxy]- (9CI) (CA INDEX NAME)



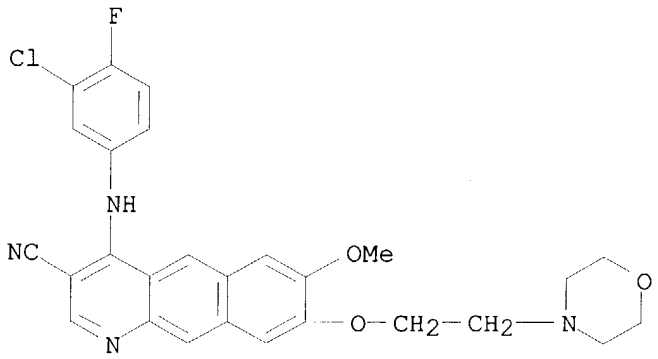
RN 348619-12-5 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2-chloro-5-methoxy-4-methylphenyl)amino]-7-methoxy-8-[2-(4-methyl-1-piperazinyl)ethoxy]- (9CI) (CA INDEX NAME)



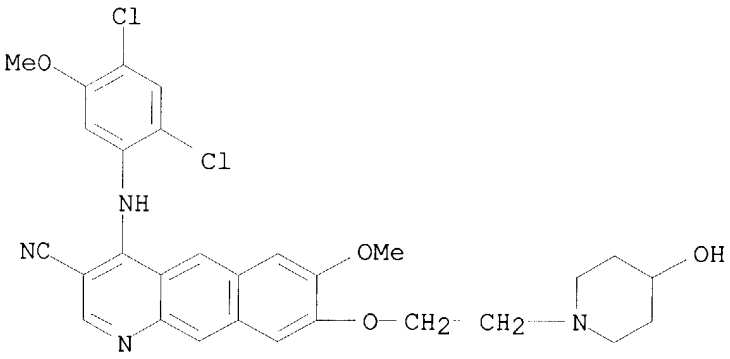
RN 348619-13-6 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichloro-5-methoxyphenyl)amino]-7-[2-(4-hydroxy-1-piperidinyl)ethoxy]-8-methoxy- (9CI) (CA INDEX NAME)



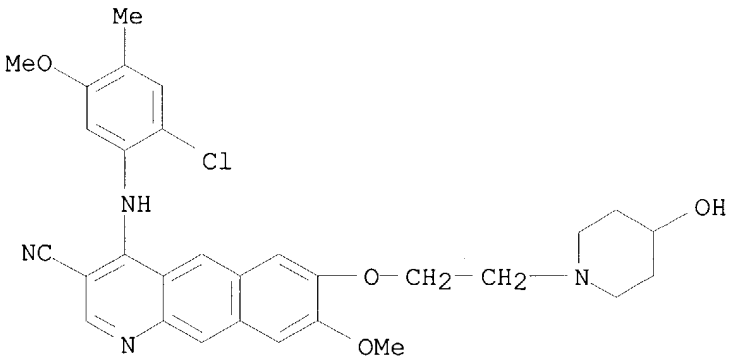
RN 348619-14-7 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(3-chloro-4-fluorophenyl)amino]-7-methoxy-8-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)



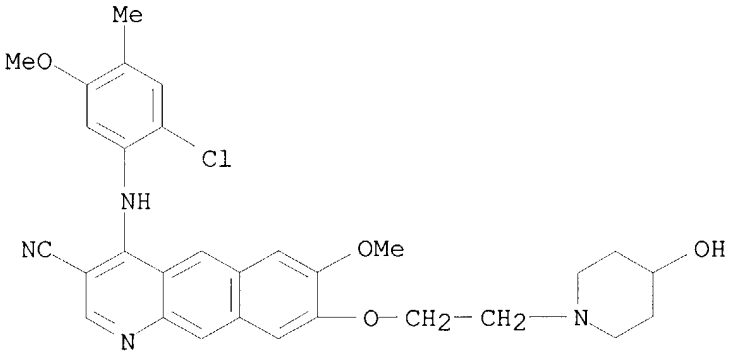
RN 348619-15-8 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichloro-5-methoxyphenyl)amino]-8-[2-(4-hydroxy-1-piperidinyl)ethoxy]-7-methoxy- (9CI) (CA INDEX NAME)



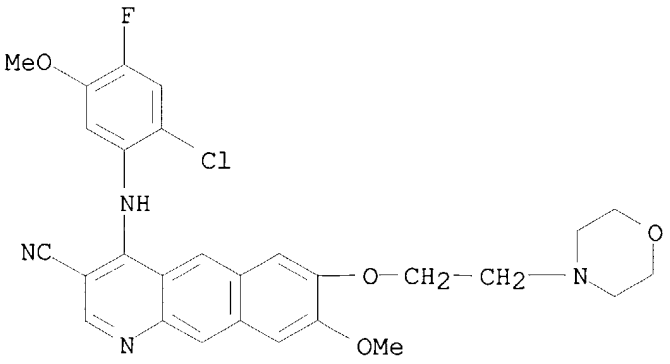
RN 348619-16-9 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2-chloro-5-methoxy-4-methylphenyl)amino]-7-[2-(4-hydroxy-1-piperidinyl)ethoxy]-8-methoxy- (9CI) (CA INDEX NAME)



RN 348619-17-0 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2-chloro-5-methoxy-4-methylphenyl)amino]-8-[2-(4-hydroxy-1-piperidinyl)ethoxy]-7-methoxy- (9CI) (CA INDEX NAME)

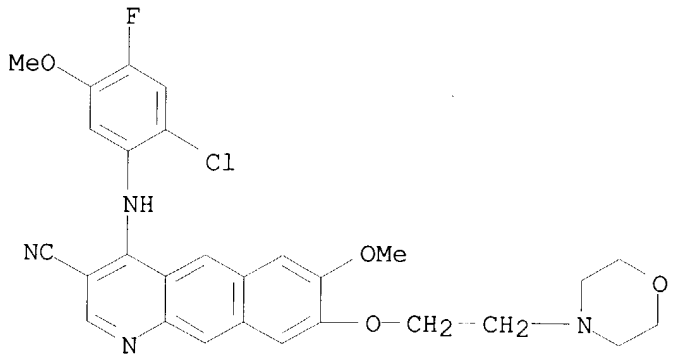


RN 348619-18-1 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2-chloro-4-fluoro-5-methoxyphenyl)amino]-8-methoxy-7-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)

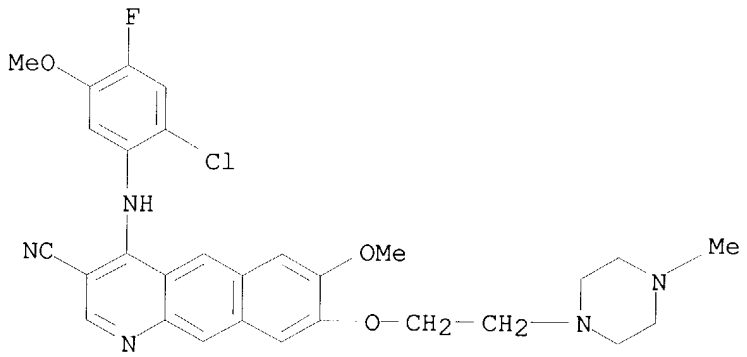


RN 348619-19-2 HCAPLUS

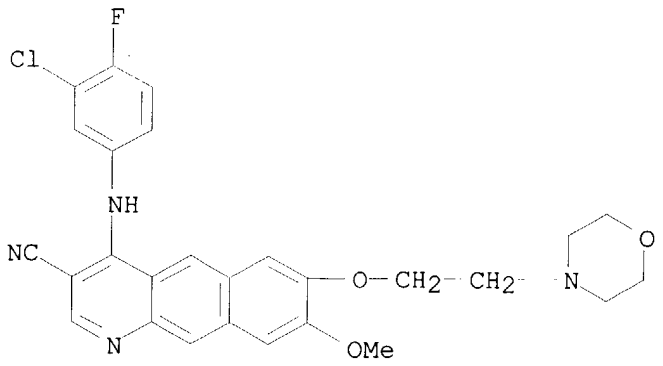
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2-chloro-4-fluoro-5-methoxyphenyl)amino]-7-methoxy-8-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)



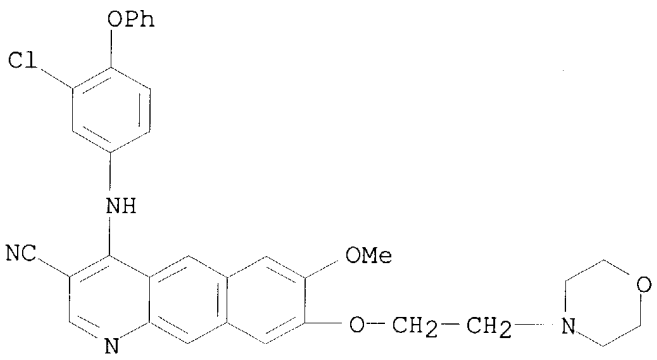
RN 348619-20-5 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2-chloro-4-fluoro-5-methoxyphenyl)amino]-7-methoxy-8-[2-(4-methyl-1-piperazinyl)ethoxy]- (9CI) (CA INDEX NAME)



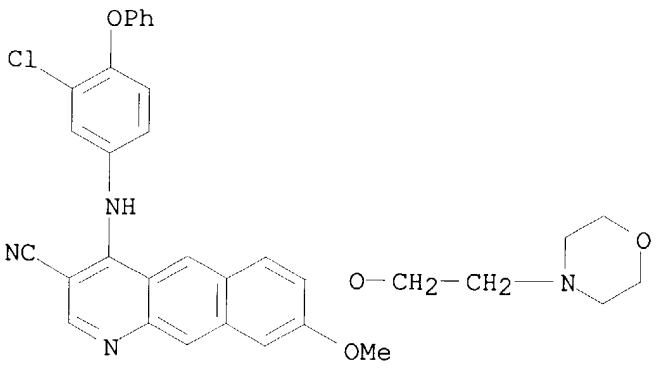
RN 348619-21-6 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(3-chloro-4-fluorophenyl)amino]-8-methoxy-7-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)



RN 348619-22-7 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(3-chloro-4-phenoxyphenyl)amino]-7-methoxy-8-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)

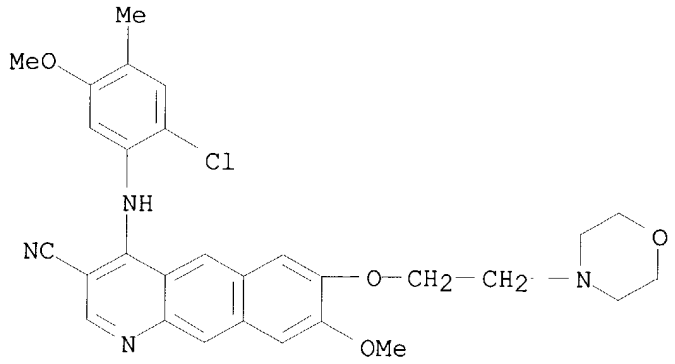


RN 348619-23-8 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(3-chloro-4-phenoxyphenyl)amino]-8-methoxy-7-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)

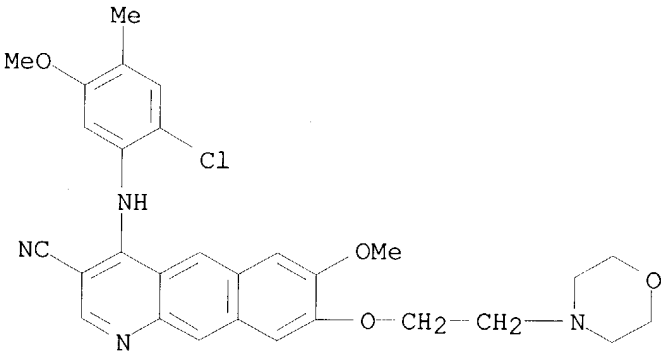


RN 348619-24-9 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2-chloro-5-methoxy-4-methylphenyl)amino]-8-methoxy-7-[2-(4-morpholinyl)ethoxy]- (9CI) (CA

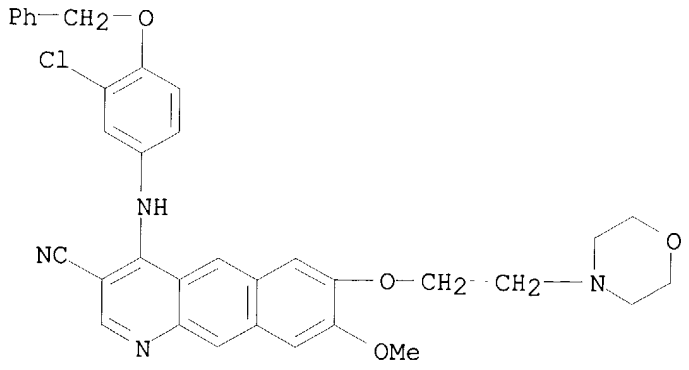
INDEX NAME)



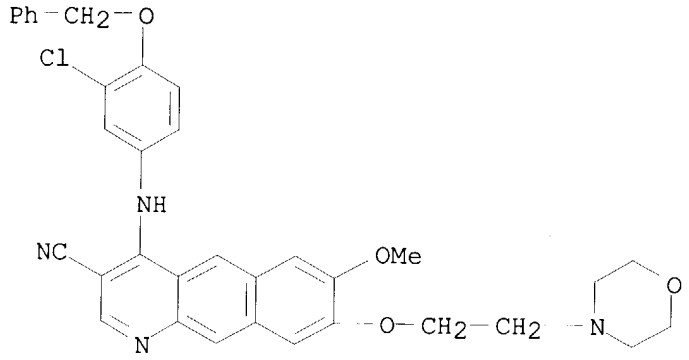
RN 348619-25-0 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2-chloro-5-methoxy-4-methylphenyl)amino]-7-methoxy-8-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)



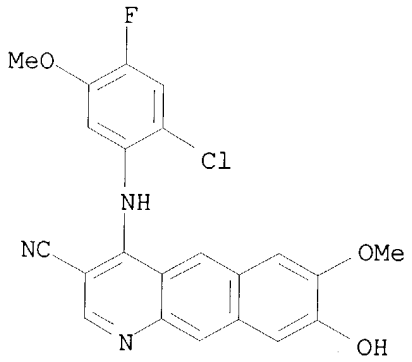
RN 348619-26-1 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[[3-chloro-4-(phenylmethoxy)phenyl]amino]-8-methoxy-7-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)



RN 348619-27-2 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[[3-chloro-4-(phenylmethoxy)phenyl]amino]-7-methoxy-8-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)



RN 348619-29-4 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2-chloro-4-fluoro-5-methoxyphenyl)amino]-8-hydroxy-7-methoxy- (9CI) (CA INDEX NAME)



L7 ANSWER 9 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:730751 HCAPLUS
DN 135:288797
ED Entered STN: 07 Oct 2001
TI Preparation of tricyclic compounds containing quinolinecarbonitrile as protein kinase inhibitors
IN Tsou, Hwei-Ru; Overbeek-Klumpers, Elsebe Geraldine; Wissner, Allan
PA American Home Products Corporation, USA
SO PCT Int. Appl., 243 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C07D498-04
ICS C07D513-04; A61K031-436; A61P013-12; A61P019-10; A61P037-06; A61P035-00
CC 28-18 (Heterocyclic Compounds (More Than One Hetero Atom))

Section cross-reference(s): 1, 7, 63

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001072758	A1	20011004	WO 2001-US10124	20010328
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1268487	A1	20030102	EP 2001-920873	20010328
	EP 1268487	B1	20031126		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	BR 2001009598	A	20030204	BR 2001-9598	20010328
	JP 2003528880	T2	20030930	JP 2001-570667	20010328
	AT 255114	E	20031215	AT 2001-920873	20010328
PRAI	US 2000-536919	A	20000328		
	WO 2001-US10124	W	20010328		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2001072758	ICM	C07D498-04
	ICS	C07D513-04; A61K031-436; A61P013-12; A61P019-10; A61P037-06; A61P035-00

OS MARPAT 135:288797

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Tricyclic compds. containing quinolinecarbonitrile rings, I (Z = NH, O, S(O)n, NR where n = 0-2 and R =C1-6 alkyl, C2-7 carboalkyl; X = C3-7 (un)substituted cycloalkyl, (un)substituted-pyridinyl, -pyrimidinyl, -aryl with halogen, oxo, thio, alkyl, alkenyl, alkynyl, halomethyl, alkoxymethyl, alkylthio groups, etc.; A = a-d where G1-G4 are independently from H, (un)substituted C1-6 alkyl groups and R1 = H, (un)substituted- C1-5 alkyl, aryl or heterocyclic radical) or pharmaceutically acceptable salts were prepared as antineoplastic agents and for treatment of polycystic kidney disease. Thus II (R2 = NMe2) was prepared in 52% yield from the mixture of II (R2 = Br and Cl) and dimethylamine DMF, N,N-diisopropylethylamine in THF. II (R2 = NMe2) is an effective inhibitor of tumor growth in vivo and therefore useful in cancer treatment, with the total daily dosage for most large mammals preferably being from about 2-500 mg., and addnl. was found to be useful in treating or inhibiting polycystic kidney disease and colonic polyps.

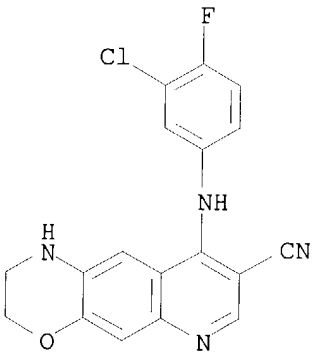
ST quinolinecarbonitrile tricyclic deriv prepn protein kinase inhibitor; antitumor agent cyanoquinoline prepn; EGFR kinase inhibitor cyanoquinoline prepn; polycystic kidney disease fused tricyclic cyanoquinoline deriv prepn

IT Kidney, disease

(polycystic; preparation of tricyclic compds. containing quinolinecarbonitrile

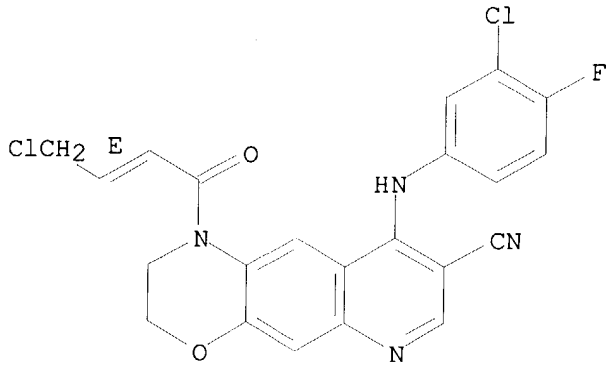
as protein kinase inhibitors)
IT Antitumor agents
(preparation of tricyclic compds. containing quinolinecarbonitrile as protein
kinase inhibitors)
IT Epidermal growth factor receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(preparation of tricyclic compds. containing quinolinecarbonitrile as protein
kinase inhibitors)
IT Polycyclic compounds
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(tricyclic, fused; preparation of tricyclic compds. containing quinolinecarbonitrile as protein kinase inhibitors)
IT 340830-03-7, Receptor protein tyrosine kinase
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(for growth factors; preparation of tricyclic compds. containing quinolinecarbonitrile as protein kinase inhibitors)
IT 364371-82-4
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(preparation of tricyclic compds. containing quinolinecarbonitrile as protein
kinase inhibitors)
IT **364371-69-7P 364371-70-0P 364371-71-1P**
364371-76-6P 364371-85-7P 364371-86-8P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of tricyclic compds. containing quinolinecarbonitrile as protein
kinase inhibitors)
IT **364371-73-3P 364371-74-4P 364371-77-7P**
364371-87-9P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of tricyclic compds. containing quinolinecarbonitrile as protein
kinase inhibitors)
IT 64-19-7, Acetic acid, reactions 94-05-3 99-59-2, 2-Methoxy-5-nitroaniline 124-40-3, Dimethylamine, reactions 367-21-5, 3-Chloro-4-fluorophenylamine 536-90-3, 3-Methoxyphenylamine 554-00-7, 2,4-Dichlorophenylamine 4635-59-0, 4-Chlorobutyryl chloride 5308-25-8, 1-Ethylpiperazine 6139-84-0, 4-Chlorobutanal 51544-74-2, 4-Bromocrotonyl chloride 98446-49-2, 2,4-Dichloro-5-methoxyaniline 364371-72-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of tricyclic compds. containing quinolinecarbonitrile as protein
kinase inhibitors)
IT 33721-54-9P 64353-88-4P 71083-64-2P 214470-27-6P 214470-33-4P 214485-59-3P 214485-60-6P 364371-68-6P **364371-75-5P** 364371-78-8P 364371-79-9P 364371-80-2P 364371-81-3P 364371-83-5P

364371-84-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of tricyclic compds. containing quinolinecarbonitrile as protein
kinase inhibitors)
RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Johnson, B; US 6002008 A 1999 HCAPLUS
(2) Pf Medicament; FR 2712290 A 1995 HCAPLUS
IT **364371-69-7P 364371-70-0P 364371-71-1P**
364371-76-6P 364371-85-7P 364371-86-8P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of tricyclic compds. containing quinolinecarbonitrile as protein
kinase inhibitors)
RN 364371-69-7 HCAPLUS
CN 1H-Pyrido[3,2-g][1,4]benzoxazine-8-carbonitrile, 9-[(3-chloro-4-fluorophenyl)amino]-2,3-dihydro- (9CI) (CA INDEX NAME)



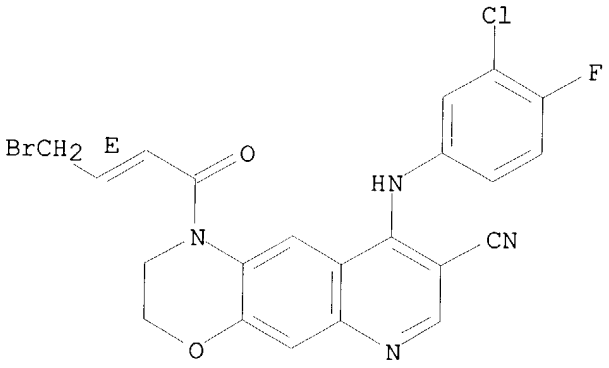
RN 364371-70-0 HCAPLUS
CN 1H-Pyrido[3,2-g][1,4]benzoxazine-8-carbonitrile, 9-[(3-chloro-4-fluorophenyl)amino]-1-[(2E)-4-chloro-1-oxo-2-butenyl]-2,3-dihydro- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

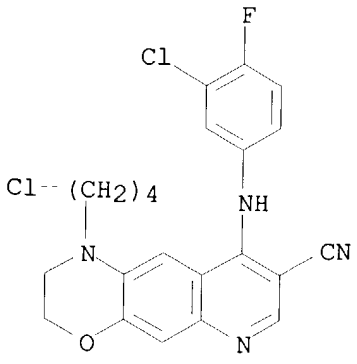


RN 364371-71-1 HCAPLUS
CN 1H-Pyrido[3,2-g][1,4]benzoxazine-8-carbonitrile, 1-[(2E)-4-bromo-1-oxo-2-butenyl]-9-[(3-chloro-4-fluorophenyl)amino]-2,3-dihydro- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

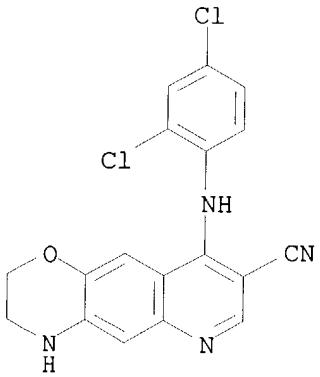


RN 364371-76-6 HCAPLUS
CN 1H-Pyrido[3,2-g][1,4]benzoxazine-8-carbonitrile, 1-(4-chlorobutyl)-9-[(3-chloro-4-fluorophenyl)amino]-2,3-dihydro- (9CI) (CA INDEX NAME)

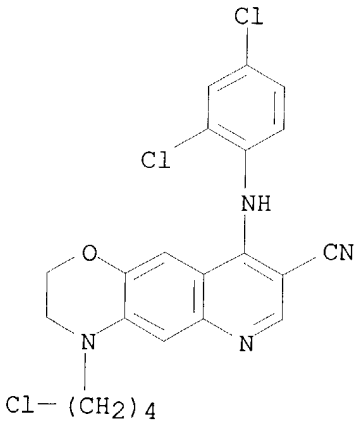


RN 364371-85-7 HCAPLUS

CN 2H-Pyrido[2,3-g]-1,4-benzoxazine-8-carbonitrile, 9-[(2,4-dichlorophenyl)amino]-3,4-dihydro- (9CI) (CA INDEX NAME)

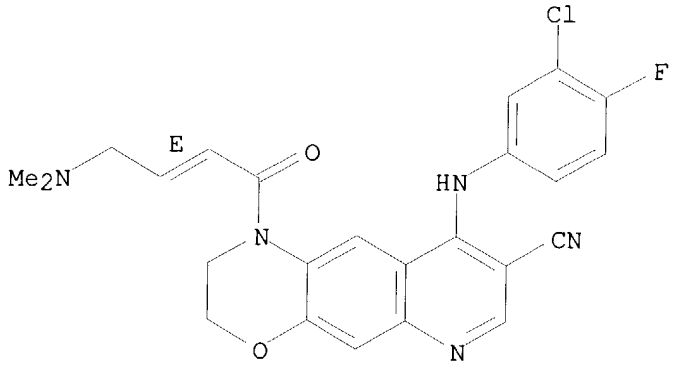


RN 364371-86-8 HCAPLUS
CN 2H-Pyrido[2,3-g]-1,4-benzoxazine-8-carbonitrile, 4-(4-chlorobutyl)-9-[(2,4-dichlorophenyl)amino]-3,4-dihydro- (9CI) (CA INDEX NAME)

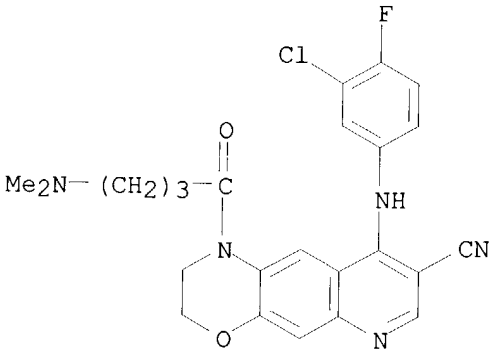


IT **364371-73-3P 364371-74-4P 364371-77-7P 364371-87-9P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of tricyclic compds. containing quinolinecarbonitrile as protein
kinase inhibitors)
RN 364371-73-3 HCAPLUS
CN 1H-Pyrido[3,2-g][1,4]benzoxazine-8-carbonitrile, 9-[(3-chloro-4-fluorophenyl)amino]-1-[(2E)-4-(dimethylamino)-1-oxo-2-butenyl]-2,3-dihydro- (9CI) (CA INDEX NAME)

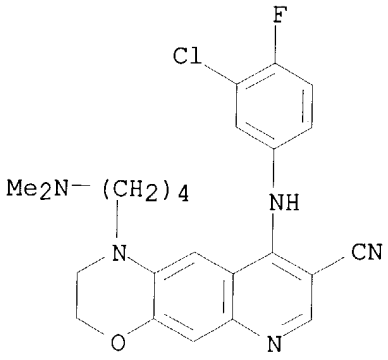
Double bond geometry as shown.



RN 364371-74-4 HCAPLUS
CN 1H-Pyrido[3,2-g][1,4]benzoxazine-8-carbonitrile, 9-[(3-chloro-4-fluorophenyl)amino]-1-[4-(dimethylamino)-1-oxobutyl]-2,3-dihydro- (9CI) (CA INDEX NAME)

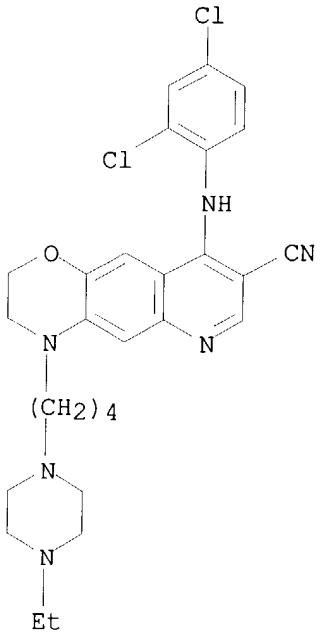


RN 364371-77-7 HCAPLUS
CN 1H-Pyrido[3,2-g][1,4]benzoxazine-8-carbonitrile, 9-[(3-chloro-4-fluorophenyl)amino]-1-[4-(dimethylamino)butyl]-2,3-dihydro- (9CI) (CA INDEX NAME)

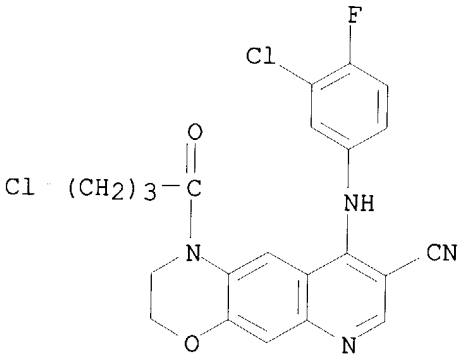


RN 364371-87-9 HCAPLUS

CN 2H-Pyrido[2,3-g]-1,4-benzoxazine-8-carbonitrile, 9-[(2,4-dichlorophenyl)amino]-4-[4-(4-ethyl-1-piperazinyl)butyl]-3,4-dihydro- (9CI) (CA INDEX NAME)



IT **364371-75-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of tricyclic compds. containing quinolinecarbonitrile as protein
kinase inhibitors)
RN 364371-75-5 HCAPLUS
CN 1H-Pyrido[3,2-g][1,4]benzoxazine-8-carbonitrile, 9-[(3-chloro-4-fluorophenyl)amino]-1-(4-chloro-1-oxobutyl)-2,3-dihydro- (9CI) (CA INDEX NAME)



L7 ANSWER 10 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2001:693148 HCAPLUS
DN 135:242152
ED Entered STN: 21 Sep 2001
TI Preparation of 4-anilinoquinoline-3-carbonitriles as colonic polyp inhibitors
IN Frost, Philip; Discafani-Marro, Carolyn M.
PA American Cyanamid Company, USA
SO PCT Int. Appl., 207 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61P001-00
ICS A61K031-4706; A61K031-4709
CC 27-17 (Heterocyclic Compounds (One Hetero Atom))
Section cross-reference(s): 1
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001068186	A2	20010920	WO 2001-US7068	20010306
	WO 2001068186	A3	20020117		
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	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1263503	A2	20021211	EP 2001-918367	20010306
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
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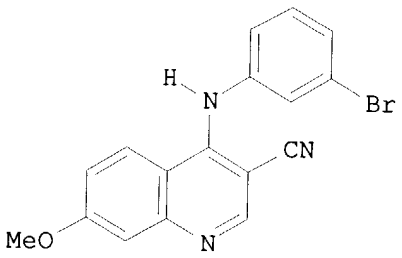
	JP 2003526686	T2	20030909	JP 2001-566747	20010306
	US 6384051	B1	20020507	US 2001-805070	20010313
	NO 2002004356	A	20021112	NO 2002-4356	20020912
PRAI	US 2000-304198P	P	20000313		
	US 2000-524196	A	20000313		
	WO 2001-US7068	W	20010306		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2001068186	ICM	A61P001-00
	ICS	A61K031-4706; A61K031-4709

OS MARPAT 135:242152
GI



II

AB R(CH2)nZZ1CN [I; R = (un)substituted cycloalkyl, -Ph, -pyridinyl, -pyrimidinyl; Z = O, S, (alkyl)imino; Z1 = 5-8-(un)substituted quinoline-4,3-diyl; n = 0 or 1] were prepared Thus, 3-(MeO)C6H4NH2 was cyclocondensed with NCC(:CHOEt)CO2Et and the chlorinated product aminated by 3-BrC6H4NH2 to give title compound II. Data for biol. activity of 1 prepared I were given.

ST anilinoquinolinecarbonitrile prepn colonic polyp inhibitor

IT Intestine, neoplasm
(polyp; preparation of 4-anilinoquinoline-3-carbonitriles as colonic polyp inhibitors)

IT 214486-65-4P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of 4-anilinoquinoline-3-carbonitriles as colonic polyp inhibitors)

IT

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214486-48-3P 214486-49-4P 214486-50-7P 214486-51-8P 214486-52-9P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of 4-anilinoquinoline-3-carbonitriles as colonic polyp inhibitors)

IT 214486-53-0P 214486-54-1P 214486-55-2P 214486-56-3P 214486-57-4P
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214487-25-9P 214488-80-9P 214489-60-8P 326894-84-2P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of 4-anilinoquinoline-3-carbonitriles as colonic polyp inhibitors)

IT 62-53-3, Aniline, reactions 79-03-8, Propionyl chloride 88-68-6, Anthranilamide 94-05-3, Ethyl (ethoxymethylene)cyanoacetate 95-03-4, 5-Chloro-o-anisidine 95-69-2, 4-Chloro-2-methylaniline 95-76-1, 3,4-Dichloroaniline 95-84-1, 2-Amino-p-cresol 95-85-2 97-52-9, 2-Methoxy-4-nitroaniline 98-16-8, 3-(Trifluoromethyl)aniline 99-03-6 99-09-2, 3-Nitroaniline 99-52-5 100-01-6, 4-Nitroaniline, reactions 100-46-9, Benzylamine, reactions 100-61-8, N-Methylaniline, reactions 102-49-8, 3,4-Dichlorobenzylamine 102-50-1, 4-Methoxy-2-methylaniline 104-10-9, 4-Aminophenethyl alcohol 104-96-1, 4-(Methylthio)aniline 106-40-1, p-Bromoaniline 106-53-6, 4-Bromothiophenol 107-08-4, 1-Iodopropane 107-93-7 108-42-9, 3-Chloroaniline 108-44-1, 3-Toluidine, reactions 108-91-8, Cyclohexylamine, reactions 109-65-9, 1-Bromobutane 110-91-8, Morpholine, reactions 134-20-3, Methyl anthranilate 139-59-3, 4-Phenoxyaniline 141-75-3, Butyryl chloride 320-51-4, 4-Chloro-3-trifluoromethylaniline 363-81-5, 2,4,6-Trifluoroaniline 367-21-5, 3-Chloro-4-fluoroaniline 371-40-4, 4-Fluoroaniline 372-19-0, 3-Fluoroaniline 452-69-7, 4-Fluoro-3-methylaniline 455-14-1, 4-(Trifluoromethyl)aniline 462-08-8, 3-Aminopyridine 536-46-9, 4-Dimethylaminoaniline dihydrochloride 536-90-3, 3-Methoxyaniline 589-16-2, 4-Ethylaniline 590-93-2, 2-Butynoic acid 591-19-5, 3-Bromoaniline 591-27-5, 3-Aminophenol 609-21-2, 4-Amino-2,6-dibromophenol 615-55-4, 3,4-Dibromoaniline 621-33-0, 3-Ethoxyaniline 626-01-7, 3-Iodoaniline 632-02-0, 3-Chloropropyl p-toluenesulfonate 645-08-9, 3-Hydroxy-4-methoxybenzoic acid 656-64-4, 3-Bromo-4-fluoroaniline 814-68-6, Acryloyl chloride 920-46-7 1535-73-5, 3-Trifluoromethoxyaniline 1609-93-4 1783-81-9, 3-(Methylthio)aniline 1877-77-6, 3-Aminobenzyl alcohol 2237-30-1, 3-Aminobenzonitrile

2835-68-9, 4-Aminobenzamide 2835-95-2, 3-Hydroxy-4-methylaniline
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2987-53-3 3096-71-7, 4-Amino-2,5-dimethylphenol 3171-45-7 3177-80-8,
2-Amino-3-methoxybenzoic acid 3575-32-4 3586-12-7, 3-Phenoxyaniline
3863-11-4, 3,4-Difluoroaniline 3943-74-6 3964-52-1,
4-Amino-2-chlorophenol 4403-69-4, 2-Aminobenzylamine 4432-44-4
5035-82-5, Methyl 3,4,5-trimethoxyanthranilate 5339-85-5,
2-Aminophenethyl alcohol 5345-54-0, 3-Chloro-p-anisidine 5369-16-4,
3-Isopropylaniline 5763-61-1, 3,4-Dimethoxybenzylamine 5930-28-9,
4-Amino-2,6-dichlorophenol 6315-89-5, 4-Aminoveratrole 7357-67-7,
N-(3-Chloropropyl)morpholine 10269-01-9, 3-Bromobenzylamine
13066-95-0, 4-Aminoresorcinol 13535-01-8, 3-Amino-5-bromopyridine
17609-80-2, 4-Amino-3-chlorophenol 20197-71-1, Methyl
2-amino-4,5-diethoxybenzoate 20629-35-0, 4-Bromocrotonic acid
24303-64-8, 4-Methoxy-2-butynoic acid 32631-26-8 38346-95-1
38346-97-3 50472-10-1, 2-Amino-3,6-dimethoxybenzoic acid 51544-74-2,
4-Bromobut-2-enoyl chloride 52130-17-3, 3-Amino-2-methylbenzoic acid
54060-30-9, 3-Ethynylaniline 55120-56-4, 4-Bromo-3-hydroxyaniline
57946-56-2, 4-Chloro-2-fluoroaniline 61882-45-9, 4-Methoxycrotonyl
chloride 72235-53-1, 3,4-Difluorobenzylamine 79863-92-6,
Trimethylsilyl 4-bromobut-2-enoate 83647-42-1, 3-Amino-2-methylbenzyl
alcohol 84478-72-8, 4-Chloro-2-fluoro-5-hydroxyaniline 102245-65-8
106579-00-4, 5-Methoxy-2-methyl-4-nitroaniline 118764-05-9,
4-Dimethylamino-2-butynoic acid 179688-27-8 214477-50-6 214483-18-8
214483-20-2 214487-28-2 214487-29-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of 4-anilinoquinoline-3-carbonitriles as colonic polyp inhibitors)

IT 2458-24-4P 3535-24-8P 6702-50-7P, Methyl 3-hydroxy-4-methoxybenzoate
13436-14-1P 26893-14-1P 27333-44-4P 30199-65-6P 50413-49-5P
54358-89-3P, 3-Chloroacryloyl chloride 61338-35-0P 71083-59-5P
71083-64-2P 71083-71-1P 73387-74-3P 97966-31-9P 111627-40-8P
113290-32-7P 116435-75-7P 214470-27-6P 214470-33-4P 214470-35-6P
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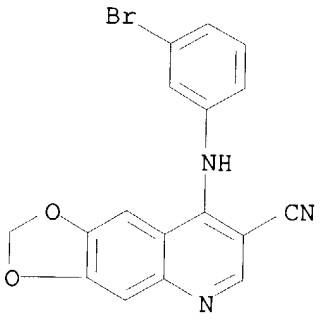
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of 4-anilinoquinoline-3-carbonitriles as colonic polyp inhibitors)

IT **214484-26-1P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of 4-anilinoquinoline-3-carbonitriles as colonic polyp inhibitors)

RN 214484-26-1 HCAPLUS
CN 1,3-Dioxolo[4,5-g]quinoline-7-carbonitrile, 8-[(3-bromophenyl)amino]- (9CI) (CA INDEX NAME)



L7 ANSWER 11 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:489374 HCAPLUS
DN 135:92639
ED Entered STN: 06 Jul 2001
TI Preparation of substituted aromatic tricyclic compounds containing nicotinonitrile rings as protein kinase inhibitors
IN Berger, Dan M.; Dutia, Minu D.; Demorin, Frenel F.; Boschelli, Diane H.; Powell, Dennis W.; Tsou, Hwei-ru; Wissner, Allan; Zhang, Nan; Ye, Fei; Wu, Biqi
PA American Home Products Corp., USA
SO PCT Int. Appl., 377 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C07D215-54
ICS C07D471-04; C07D513-04; C07D495-04; C07D491-04; A61K031-435; A61K031-4353; A61P035-00
CC 28-13 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 1
FAN.CNT 1

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PI	WO 2001047892	A1	20010705	WO 2000-US35616	20001229
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	JP 2003519127	T2	20030617	JP 2001-549364	20001229
PRAI	US 1999-473600	A	19991229		
	WO 2000-US35616	W	20001229		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2001047892	ICM	C07D215-54

ICS C07D471-04; C07D513-04; C07D495-04; C07D491-04; A61K031-435; A61K031-4353; A61P035-00

OS MARPAT 135:92639

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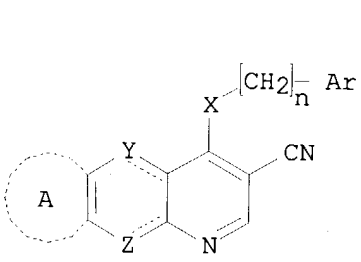

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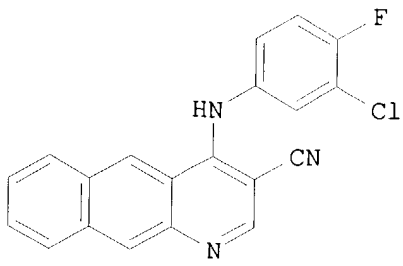

II

AB The title compds. I [Ar = (un)substituted cycloalkyl, pyridyl, pyrimidinyl, etc.; n = 0-1; X = NH, O, S, NR; R = alkyl; Y, Z = both carbon or N; A = (un)substituted benzo, pyrido, pyrimido, etc.] which are useful as inhibitors of protein tyrosine kinase and are antiproliferative agents, were prepared E.g., a 3-step synthesis of II which showed IC50 of 0.005 μM against EGF-R kinase (recombinant enzyme), was given.

ST arom tricyclic compd prepn protein kinase inhibitor; EGF receptor kinase inhibitor arom tricyclic compd prepn; antitumor arom tricyclic compd prepn

IT Antitumor agents

(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile rings as protein kinase inhibitors)

IT 263149-40-2P **348617-29-8P** 348617-39-0P 348617-40-3P
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348617-61-8P 348617-63-0P 348617-64-1P 348617-89-0P
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348618-64-4P 348618-65-5P 348618-81-5P
348619-28-3P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile rings as protein kinase inhibitors)

IT **348617-17-4P 348617-19-6P 348617-20-9P**
348617-26-5P 348617-27-6P 348617-28-7P
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348617-58-3P 348617-59-4P **348617-62-9P** 348617-65-2P
348617-66-3P **348617-71-0P 348617-72-1P**
348617-75-4P 348617-79-8P 348617-80-1P 348617-81-2P
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348618-03-1P 348618-06-4P 348618-07-5P **348618-19-9P**

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348618-47-3P **348618-58-6P 348618-60-0P**
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348618-74-6P 348618-82-6P 348618-83-7P 348618-84-8P 348618-85-9P
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348619-26-1P 348619-27-2P 348619-29-4P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile
rings as protein kinase inhibitors)

IT 79079-06-4, EGF receptor kinase 139691-76-2, raf kinase 141349-89-5, src kinase 142243-02-5, Mitogen activated protein kinase 150977-45-0
RL: BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study)
(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile
rings as protein kinase inhibitors)

IT 79-10-7, Acrylic acid, reactions 90-05-1, Guaiacol 94-05-3, Ethyl (ethoxymethylene))cyanoacetate 105-34-0, Methyl cyanoacetate 108-01-0, 2-(Dimethylamino)ethanol 109-01-3, 1-Methylpiperazine 110-91-8, Morpholine, reactions 139-59-3, 4-Phenoxyaniline 288-36-8, 1H-1,2,3-Triazole 348-62-9, 4-Chloro-2-fluorophenol 367-21-5, 3-Chloro-4-fluoroaniline 504-88-1, 3-Nitropropionic acid 540-88-5, tert-Butyl acetate 554-00-7, 2,4-Dichloroaniline 591-19-5, 3-Bromoaniline 622-40-2, 4-(2-Hydroxyethyl)morpholine 632-02-0, 3-Chloropropyl p-toluenesulfonate 814-68-6, Acryloyl chloride 873-38-1, 2-Bromo-4-chloroaniline 882-33-7, Phenyl disulfide 1142-19-4, 4,4'-Dichlorodiphenyl disulfide 2038-03-1, 4-(2-Aminoethyl)morpholine 2835-95-2, 5-Amino-o-cresol 4637-24-5 5335-29-5, 3-Chloro-4-phenoxyaniline 5959-52-4, 3-Amino-2-naphthoic acid 20357-25-9, 6-Nitroveratraldehyde 24313-88-0, 3,4,5-Trimethoxyaniline 33693-48-0, 4-Benzyloxy-3-methoxybenzyl alcohol 34674-75-4 35212-85-2, Methyl 3-aminobenzo[b]thiophene-2-carboxylate 39786-35-1, Ethyl 3-amino-2-benzo[b]furancarboxylate 43073-44-5, 6,7-Dimethoxy-2,3-naphthalenedicarboxylic anhydride 50868-72-9, 5-Methoxy-2-methylaniline 57946-56-2, 4-Chloro-2-fluoroaniline 59404-86-3, 4-Benzyloxy-3-chloroaniline 59922-33-7 62492-42-6, 4-Chloro-5-methoxy-2-methylaniline 63224-35-1 76513-69-4, 2-(Trimethylsilyl)ethoxymethyl chloride 76878-17-6 85006-21-9, 2-Chloro-5-methoxyaniline hydrochloride 98404-04-7, 2-Chloro-4-fluoro-5-methoxyaniline 98446-49-2, 2,4-Dichloro-5-methoxyaniline 131775-97-8, 7-Chloro-6-nitro-4-oxo-1,4-dihydroquinoline-3-carboxylic acid ethyl ester

133088-44-5 133303-88-5 204915-71-9, 4-(2-Chloroethoxy)-3-methoxybenzaldehyde 348619-47-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile
rings as protein kinase inhibitors)

IT 3590-37-2P, Ethyl 3-nitropropionate 53544-07-3P 53815-60-4P
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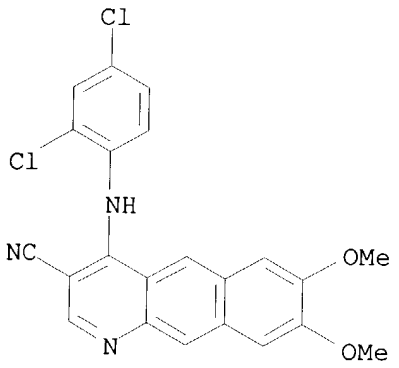
348619-45-4P 348619-46-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile
rings as protein kinase inhibitors)

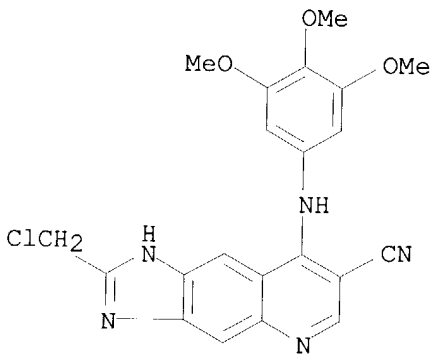
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) American Cyanamid Co; WO 9843960 A 1998 HCAPLUS
(2) Bridges, A; US 5679683 A 1997 HCAPLUS
(3) Glaxo Group Ltd; WO 9713760 A 1997 HCAPLUS
(4) Schnur Wendy W & Ef; WO 9749688 A 1997 HCAPLUS

IT **348617-29-8P 348617-61-8P 348618-16-6P**
348618-17-7P 348618-18-8P 348618-33-7P
348618-34-8P 348618-37-1P 348618-38-2P
348618-56-4P 348618-57-5P 348618-59-7P
348618-64-4P 348618-65-5P 348619-28-3P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile
rings as protein kinase inhibitors)

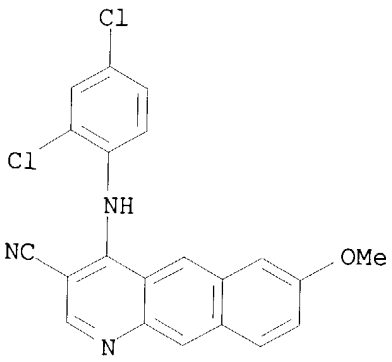
RN 348617-29-8 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichlorophenyl)amino]-7,8-dimethoxy- (9CI) (CA INDEX NAME)



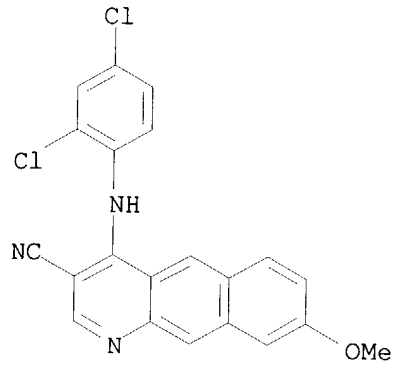
RN 348617-61-8 HCAPLUS
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 2-(chloromethyl)-8-[(3,4,5-trimethoxyphenyl)amino]- (9CI) (CA INDEX NAME)



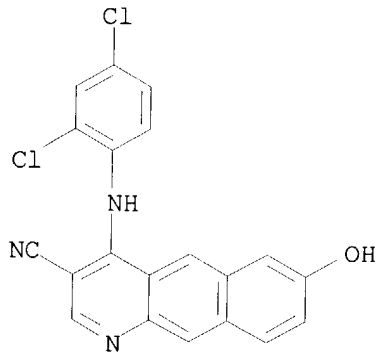
RN 348618-16-6 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichlorophenyl)amino]-7-methoxy- (9CI) (CA INDEX NAME)



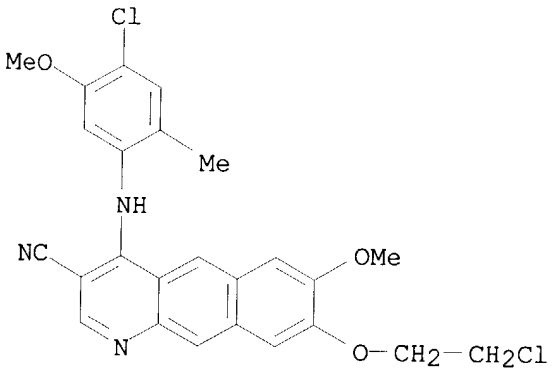
RN 348618-17-7 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichlorophenyl)amino]-8-methoxy- (9CI) (CA INDEX NAME)



RN 348618-18-8 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichlorophenyl)amino]-7-hydroxy- (9CI) (CA INDEX NAME)

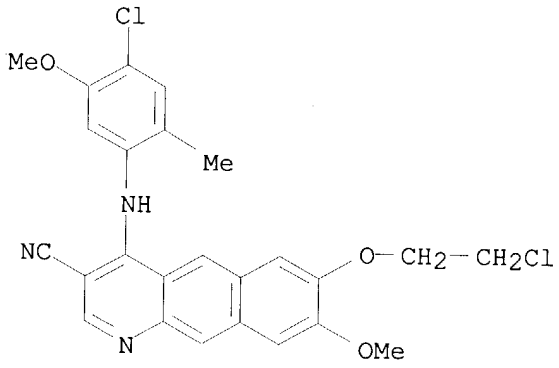


RN 348618-33-7 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 8-(2-chloroethoxy)-4-[(4-chloro-5-methoxy-2-methylphenyl)amino]-7-methoxy- (9CI) (CA INDEX NAME)

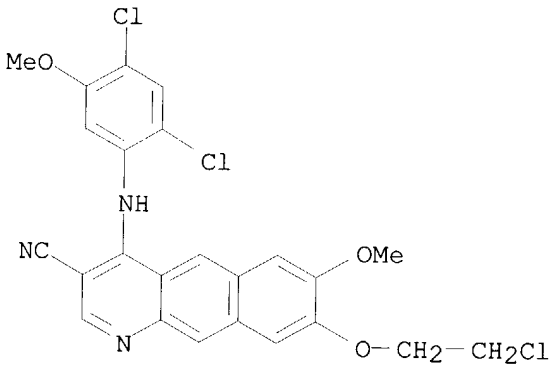


RN 348618-34-8 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 7-(2-chloroethoxy)-4-[(4-chloro-5-

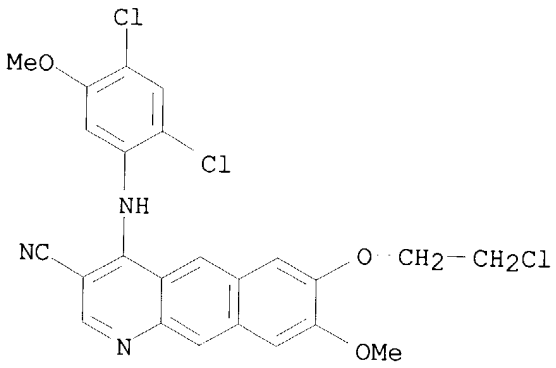
methoxy-2-methylphenyl)amino]-8-methoxy- (9CI) (CA INDEX NAME)



RN 348618-37-1 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 8-(2-chloroethoxy)-4-[(2,4-dichloro-5-methoxyphenyl)amino]-7-methoxy- (9CI) (CA INDEX NAME)

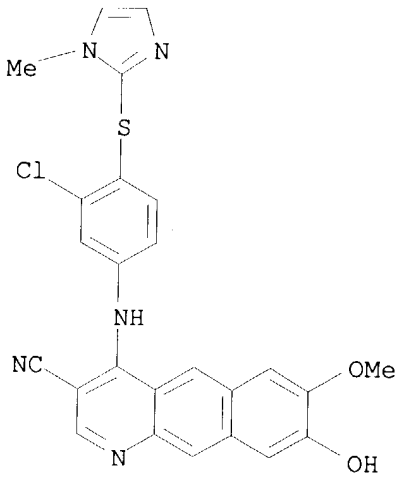


RN 348618-38-2 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 7-(2-chloroethoxy)-4-[(2,4-dichloro-5-methoxyphenyl)amino]-8-methoxy- (9CI) (CA INDEX NAME)

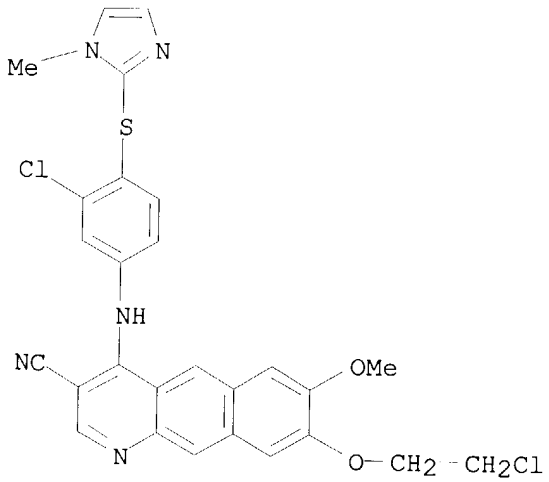


RN 348618-56-4 HCAPLUS

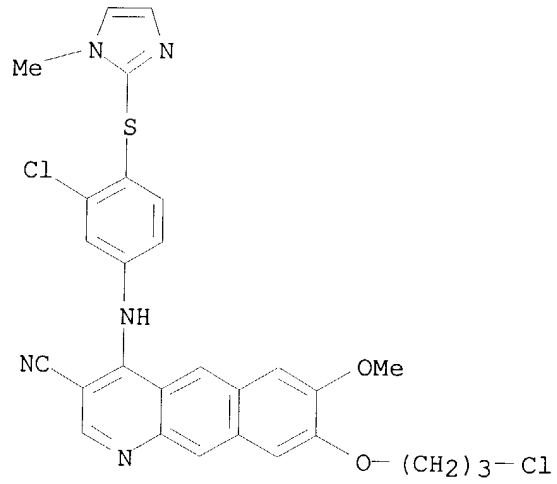
CN Benzo[g]quinoline-3-carbonitrile, 4-[[3-chloro-4-[(1-methyl-1H-imidazol-2-yl)thio]phenyl]amino]-8-hydroxy-7-methoxy- (9CI) (CA INDEX NAME)



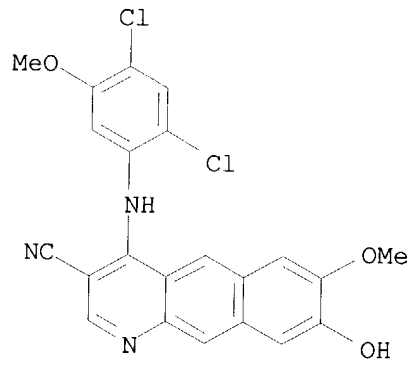
RN 348618-57-5 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 8-(2-chloroethoxy)-4-[[3-chloro-4-[(1-methyl-1H-imidazol-2-yl)thio]phenyl]amino]-7-methoxy- (9CI) (CA INDEX NAME)



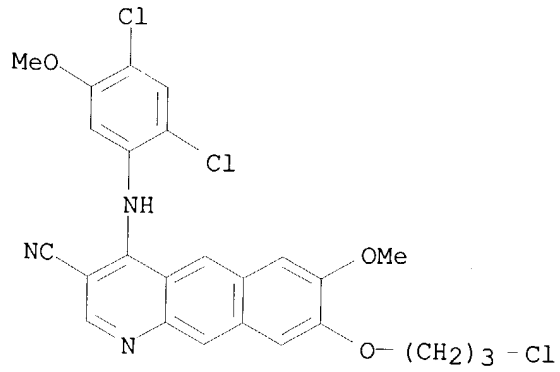
RN 348618-59-7 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[[3-chloro-4-[(1-methyl-1H-imidazol-2-yl)thio]phenyl]amino]-8-(3-chloropropoxy)-7-methoxy- (9CI) (CA INDEX NAME)



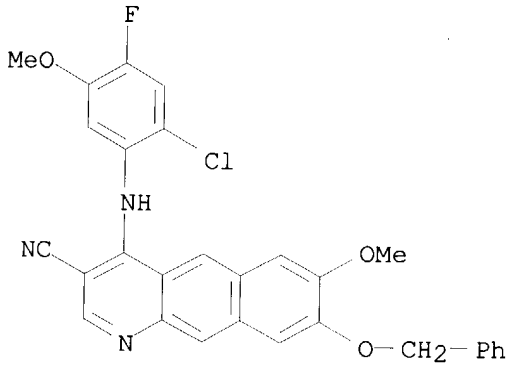
RN 348618-64-4 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichloro-5-methoxyphenyl)amino]-8-hydroxy-7-methoxy- (9CI) (CA INDEX NAME)



RN 348618-65-5 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 8-(3-chloropropoxy)-4-[(2,4-dichloro-5-methoxyphenyl)amino]-7-methoxy- (9CI) (CA INDEX NAME)



RN 348619-28-3 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2-chloro-4-fluoro-5-methoxyphenyl)amino]-7-methoxy-8-(phenylmethoxy)- (9CI) (CA INDEX NAME)



IT **348617-17-4P 348617-19-6P 348617-20-9P**
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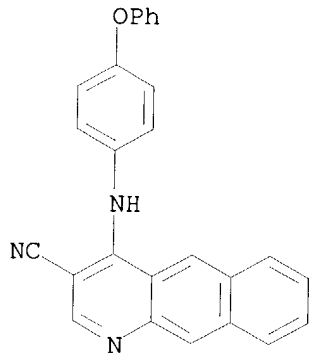
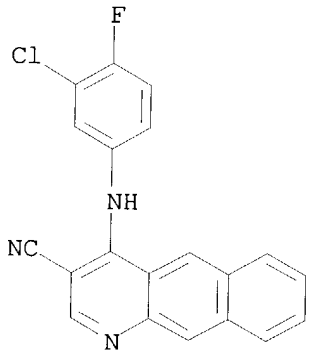
348619-29-4P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile
rings as protein kinase inhibitors)

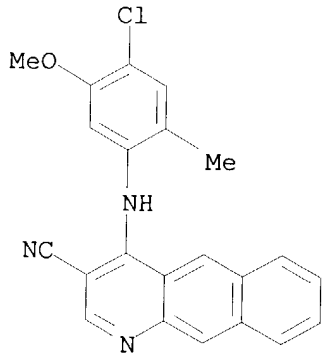
RN 348617-17-4 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(4-phenoxyphenyl)amino]- (9CI) (CA INDEX NAME)



RN 348617-19-6 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(3-chloro-4-fluorophenyl)amino]- (9CI) (CA INDEX NAME)



RN 348617-20-9 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(4-chloro-5-methoxy-2-methylphenyl)amino]- (9CI) (CA INDEX NAME)



RN 348617-26-5 HCAPLUS
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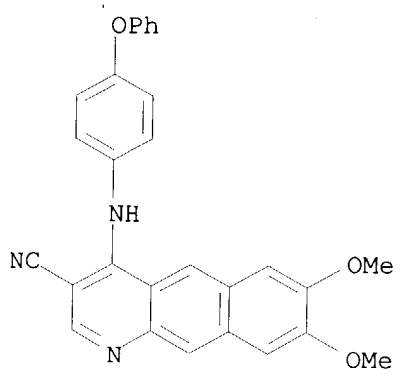
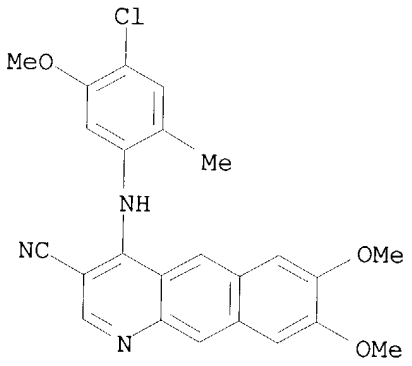
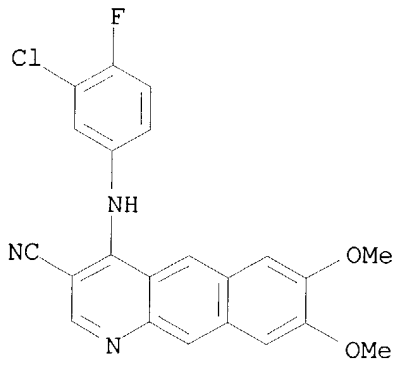


●2 HCl

RN 348617-27-6 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(4-chloro-5-methoxy-2-methylphenyl)amino]-7,8-dimethoxy- (9CI) (CA INDEX NAME)

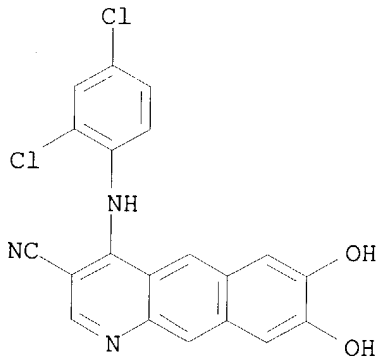


RN 348617-28-7 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(3-chloro-4-fluorophenyl)amino]-7,8-dimethoxy-, monohydrochloride (9CI) (CA INDEX NAME)

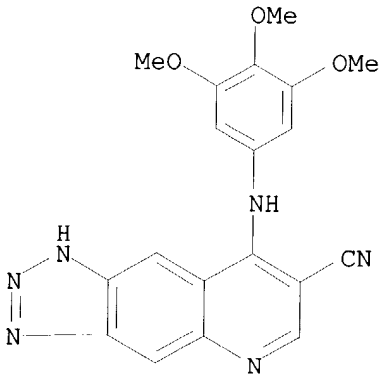


● HCl

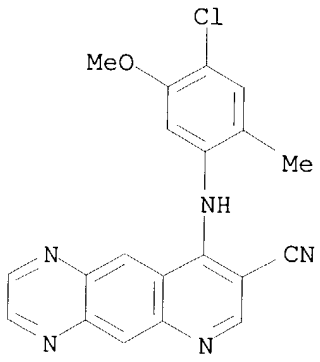
RN 348617-30-1 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichlorophenyl)amino]-7,8-dihydroxy- (9CI) (CA INDEX NAME)



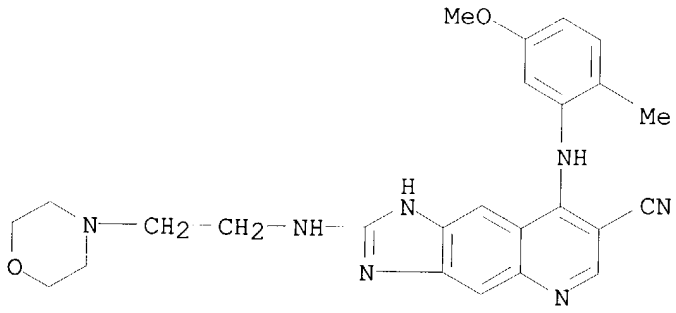
RN 348617-38-9 HCAPLUS
CN 1H-1,2,3-Triazolo[4,5-g]quinoline-7-carbonitrile, 8-[(3,4,5-trimethoxyphenyl)amino]- (9CI) (CA INDEX NAME)



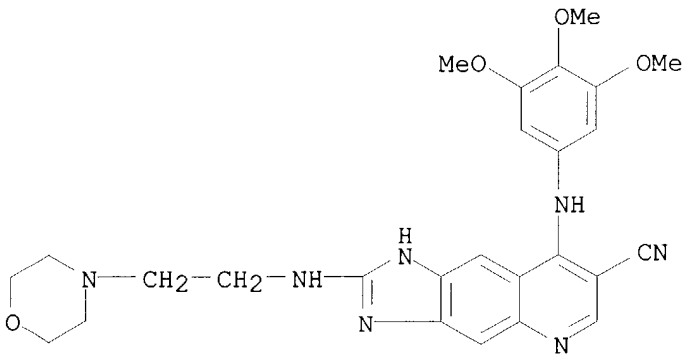
RN 348617-41-4 HCAPLUS
CN Pyrido[2,3-g]quinoxaline-8-carbonitrile, 9-[(4-chloro-5-methoxy-2-methylphenyl)amino]- (9CI) (CA INDEX NAME)



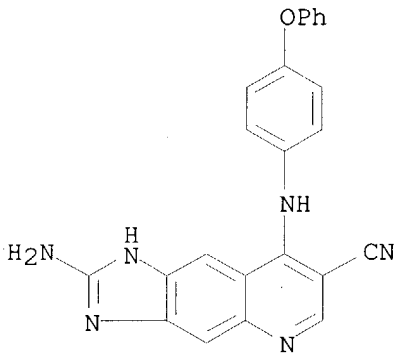
RN 348617-44-7 HCAPLUS
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(5-methoxy-2-methylphenyl)amino]-2-[[2-(4-morpholinyl)ethyl]amino]- (9CI) (CA INDEX NAME)



RN 348617-46-9 HCAPLUS
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 2-[[2-(4-morpholinyl)ethyl]amino]-8-[(3,4,5-trimethoxyphenyl)amino]- (9CI) (CA INDEX NAME)

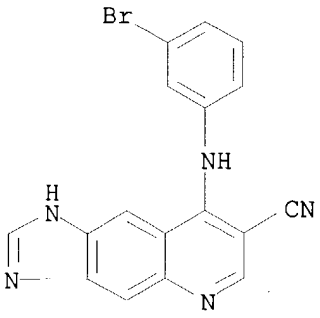


RN 348617-47-0 HCAPLUS
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 2-amino-8-[(4-phenoxyphenyl)amino]-, monohydrochloride (9CI) (CA INDEX NAME)



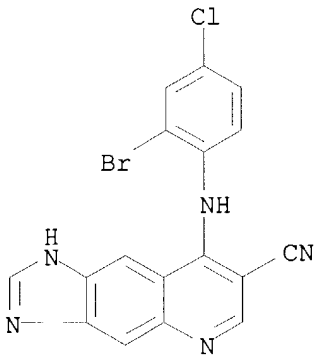
● HCl

RN 348617-50-5 HCAPLUS
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(3-bromophenyl)amino]- (9CI) (CA INDEX NAME)

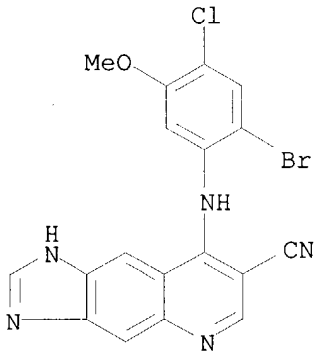


RN 348617-51-6 HCAPLUS

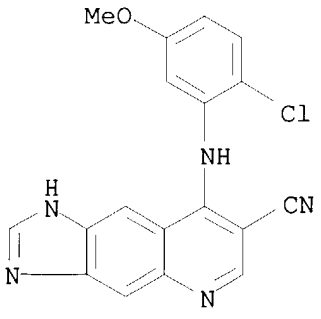
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(2-bromo-4-chlorophenyl)amino]- (9CI) (CA INDEX NAME)



RN 348617-52-7 HCAPLUS
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(2-bromo-4-chloro-5-methoxyphenyl)amino]- (9CI) (CA INDEX NAME)

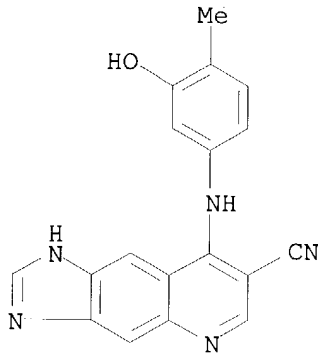


RN 348617-54-9 HCAPLUS
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(2-chloro-5-methoxyphenyl)amino]- (9CI) (CA INDEX NAME)

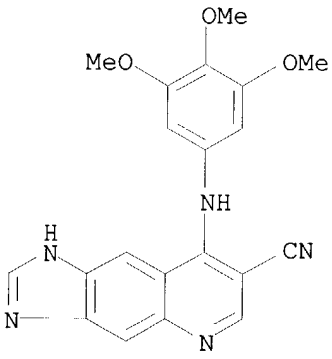


RN 348617-55-0 HCAPLUS
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(3-hydroxy-4-

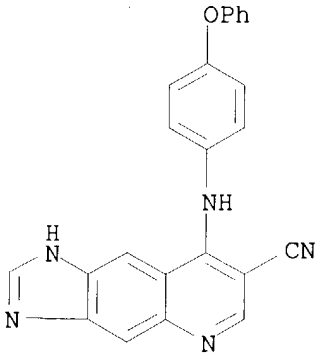
methylphenyl)amino]- (9CI) (CA INDEX NAME)



RN 348617-56-1 HCAPLUS
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(3,4,5-trimethoxyphenyl)amino]- (9CI) (CA INDEX NAME)

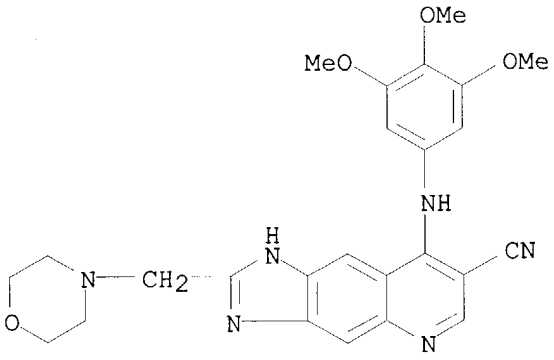


RN 348617-58-3 HCAPLUS
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(4-phenoxyphenyl)amino]- (9CI) (CA INDEX NAME)

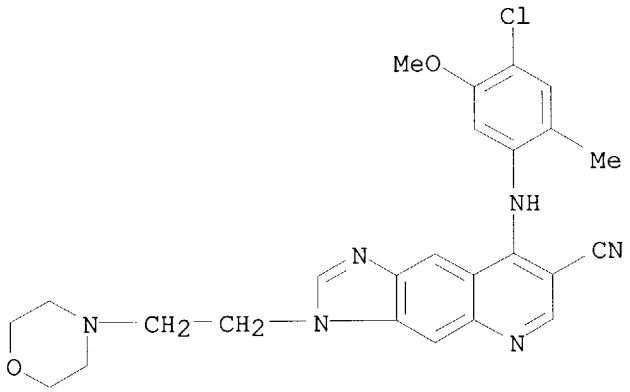


RN 348617-62-9 HCAPLUS

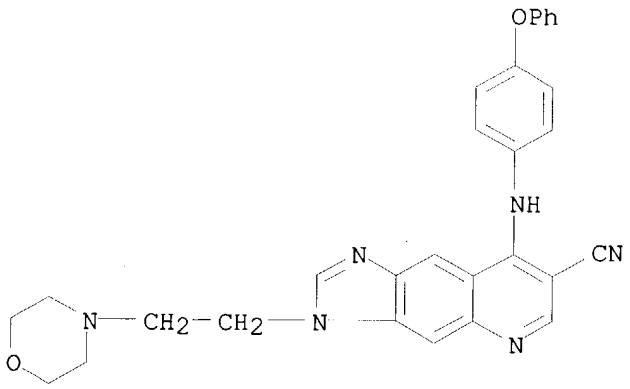
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 2-(4-morpholinylmethyl)-8-[(3,4,5-trimethoxyphenyl)amino]- (9CI) (CA INDEX NAME)



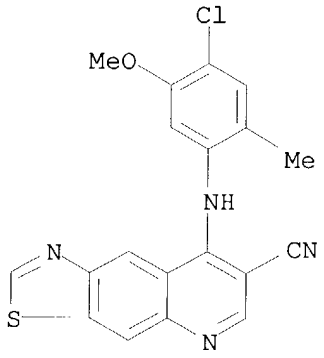
RN 348617-71-0 HCAPLUS
CN 3H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(4-chloro-5-methoxy-2-methylphenyl)amino]-3-[2-(4-morpholinyl)ethyl]- (9CI) (CA INDEX NAME)



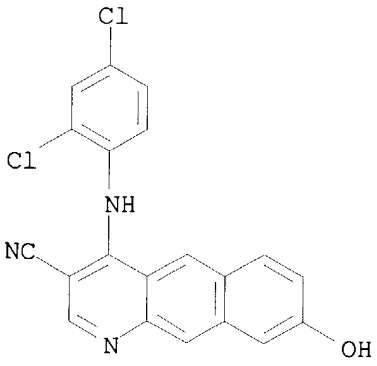
RN 348617-72-1 HCAPLUS
CN 3H-Imidazo[4,5-g]quinoline-7-carbonitrile, 3-[2-(4-morpholinyl)ethyl]-8-[(4-phenoxyphenyl)amino]- (9CI) (CA INDEX NAME)



RN 348617-75-4 HCAPLUS
CN Thiazolo[4,5-g]quinoline-7-carbonitrile, 8-[(4-chloro-5-methoxy-2-methylphenyl)amino]- (9CI) (CA INDEX NAME)

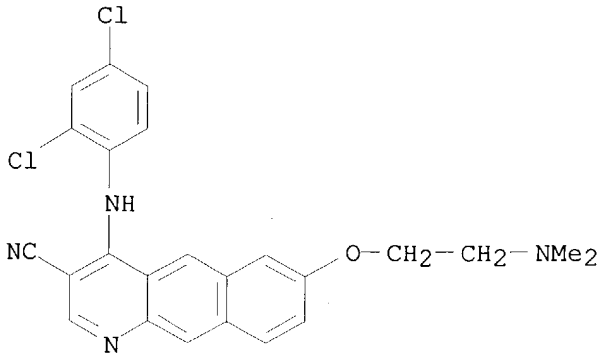


RN 348618-19-9 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichlorophenyl)amino]-8-hydroxy- (9CI) (CA INDEX NAME)

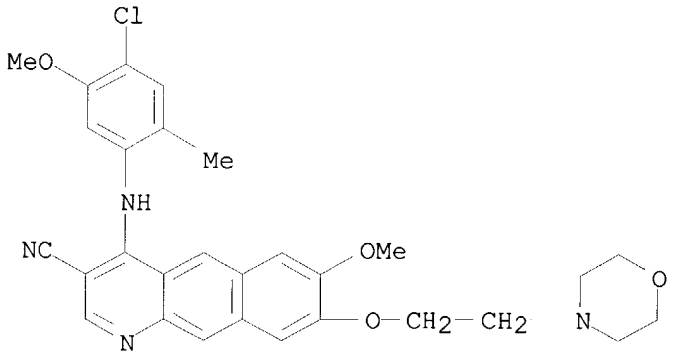


RN 348618-20-2 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichlorophenyl)amino]-7-[2-

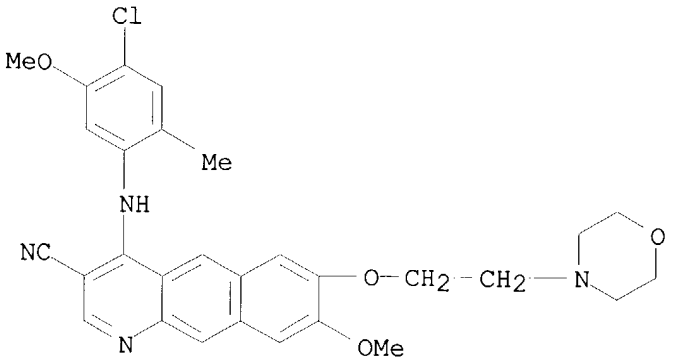
(dimethylamino)ethoxy]- (9CI) (CA INDEX NAME)



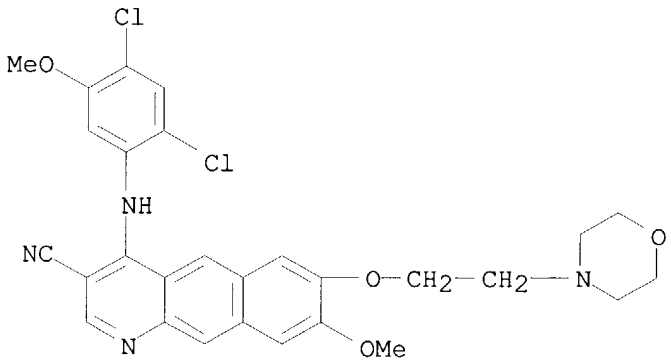
RN 348618-35-9 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(4-chloro-5-methoxy-2-methylphenyl)amino]-7-methoxy-8-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)



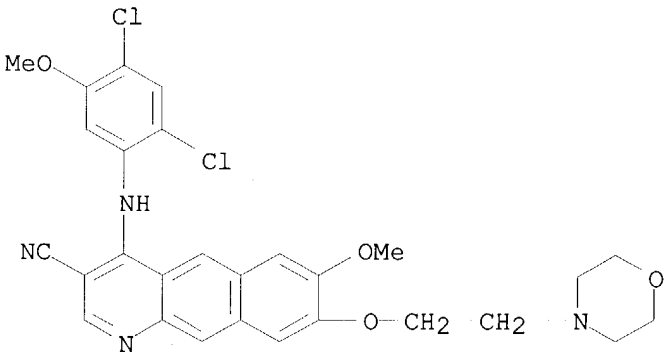
RN 348618-36-0 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(4-chloro-5-methoxy-2-methylphenyl)amino]-8-methoxy-7-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)



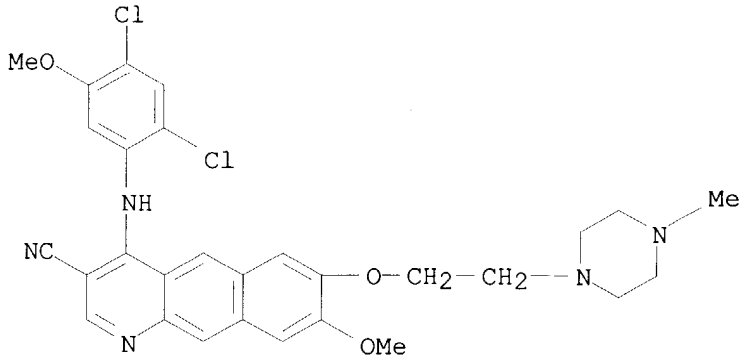
RN 348618-39-3 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichloro-5-methoxyphenyl)amino]-8-methoxy-7-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)



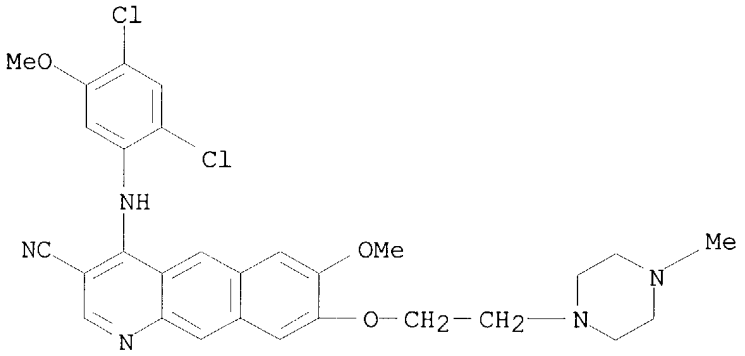
RN 348618-40-6 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichloro-5-methoxyphenyl)amino]-7-methoxy-8-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)



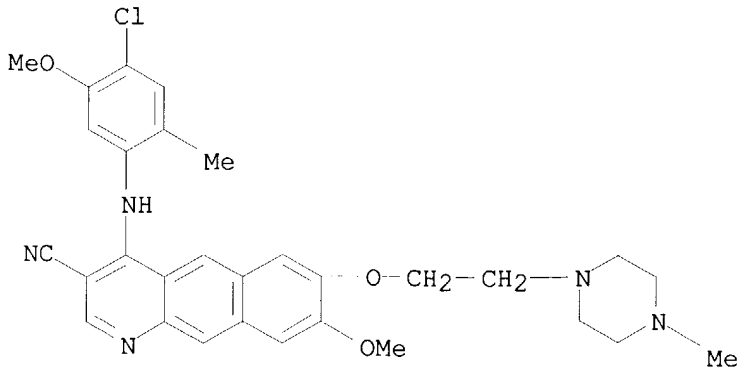
RN 348618-41-7 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichloro-5-methoxyphenyl)amino]-8-methoxy-7-[2-(4-methyl-1-piperazinyl)ethoxy]- (9CI) (CA INDEX NAME)



RN 348618-42-8 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichloro-5-methoxyphenyl)amino]-7-methoxy-8-[2-(4-methyl-1-piperazinyl)ethoxy]- (9CI) (CA INDEX NAME)

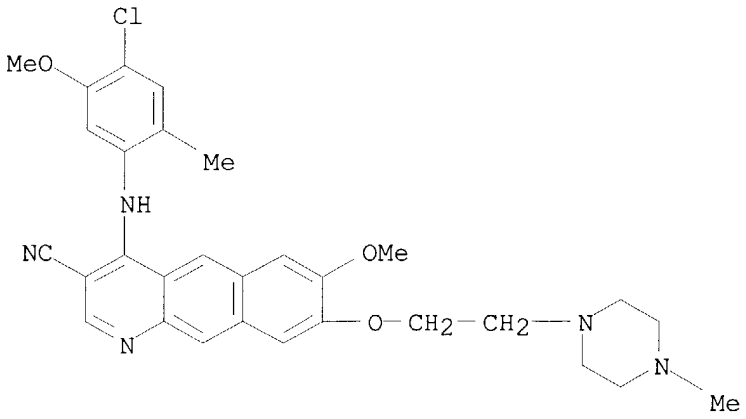


RN 348618-43-9 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(4-chloro-5-methoxy-2-methylphenyl)amino]-8-methoxy-7-[2-(4-methyl-1-piperazinyl)ethoxy]- (9CI) (CA INDEX NAME)

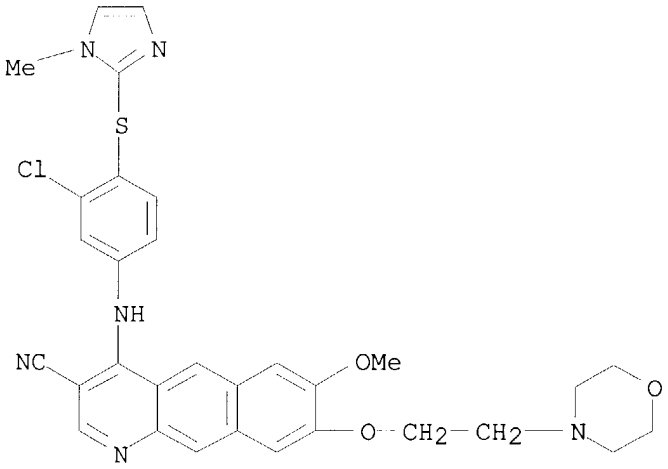


RN 348618-44-0 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(4-chloro-5-methoxy-2-

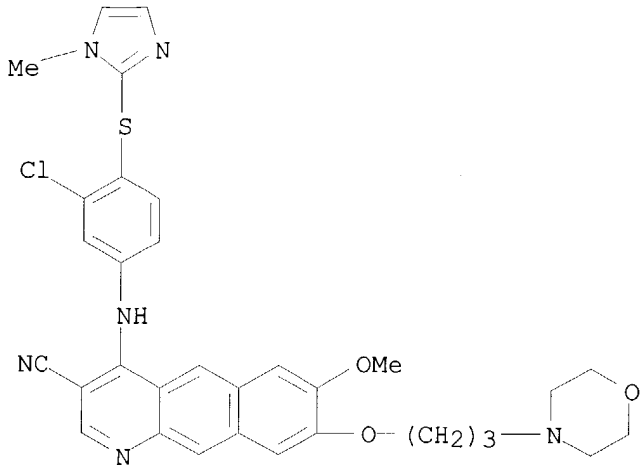
methylphenyl)amino]-7-methoxy-8-[2-(4-methyl-1-piperazinyl)ethoxy]- (9CI) (CA INDEX NAME)



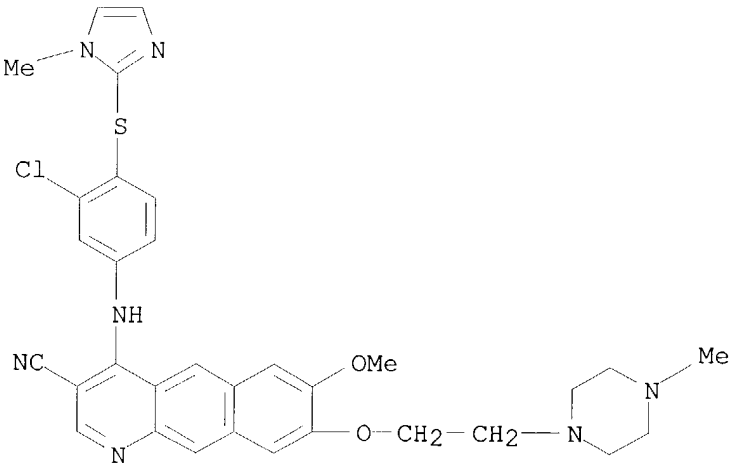
RN 348618-58-6 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[[3-chloro-4-[(1-methyl-1H-imidazol-2-yl)thio]phenyl]amino]-7-methoxy-8-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)



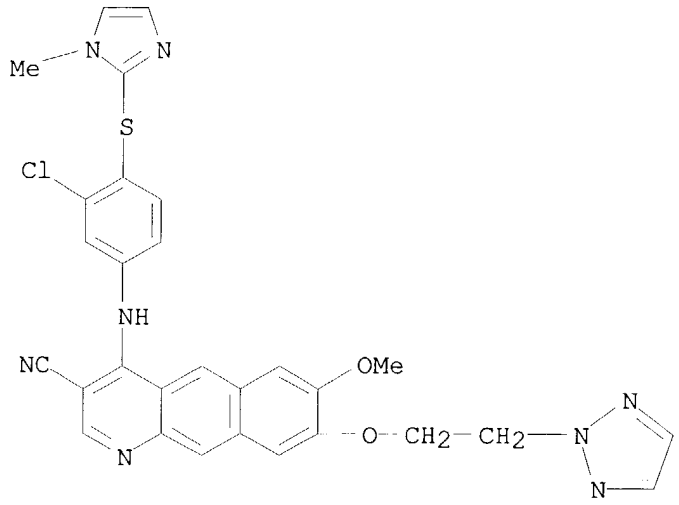
RN 348618-60-0 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[[3-chloro-4-[(1-methyl-1H-imidazol-2-yl)thio]phenyl]amino]-7-methoxy-8-[3-(4-morpholinyl)propoxy]- (9CI) (CA INDEX NAME)



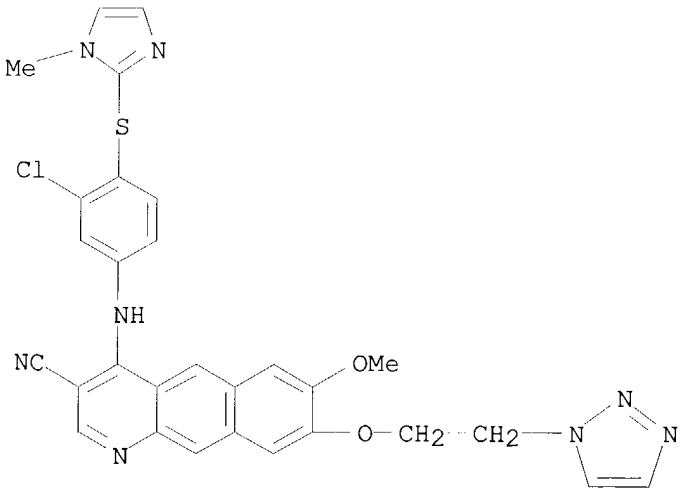
RN 348618-61-1 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[[3-chloro-4-[(1-methyl-1H-imidazol-2-yl)thio]phenyl]amino]-7-methoxy-8-[2-(4-methyl-1-piperazinyl)ethoxy]- (9CI) (CA INDEX NAME)



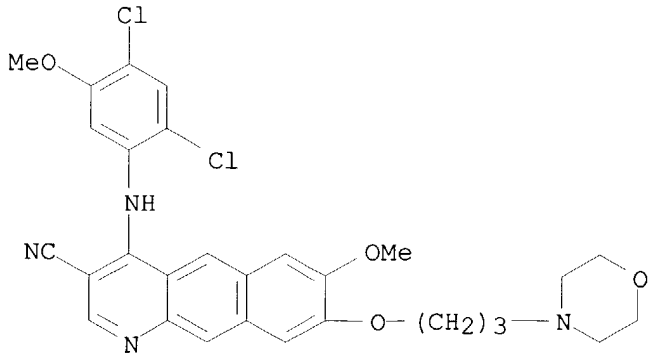
RN 348618-62-2 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[[3-chloro-4-[(1-methyl-1H-imidazol-2-yl)thio]phenyl]amino]-7-methoxy-8-[2-(2H-1,2,3-triazol-2-yl)ethoxy]- (9CI) (CA INDEX NAME)



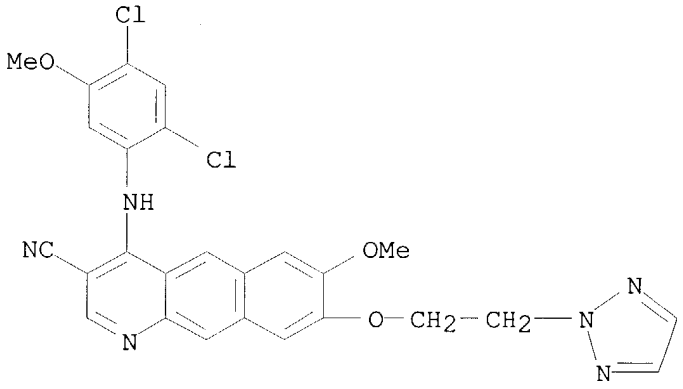
RN 348618-63-3 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[[3-chloro-4-[(1-methyl-1H-imidazol-2-yl)thio]phenyl]amino]-7-methoxy-8-[2-(1H-1,2,3-triazol-1-yl)ethoxy]- (9CI) (CA INDEX NAME)



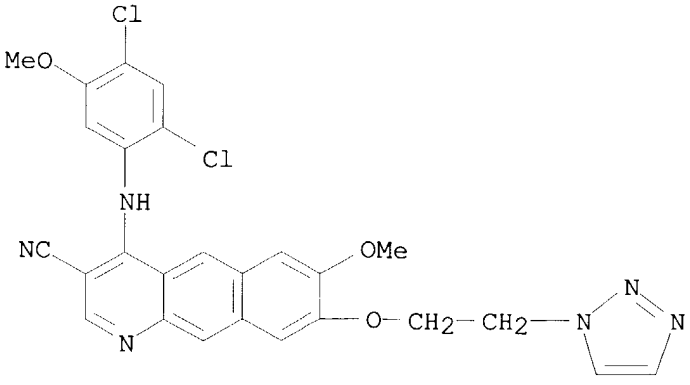
RN 348618-66-6 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichloro-5-methoxyphenyl)amino]-7-methoxy-8-[3-(4-morpholinyl)propoxy]- (9CI) (CA INDEX NAME)



RN 348618-67-7 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichloro-5-methoxyphenyl)amino]-7-methoxy-8-[2-(2H-1,2,3-triazol-2-yl)ethoxy]- (9CI) (CA INDEX NAME)

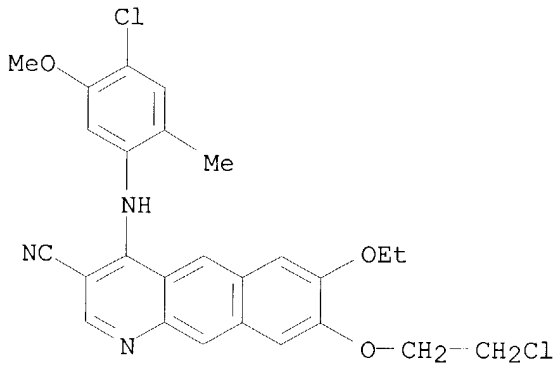


RN 348618-68-8 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichloro-5-methoxyphenyl)amino]-7-methoxy-8-[2-(1H-1,2,3-triazol-1-yl)ethoxy]- (9CI) (CA INDEX NAME)

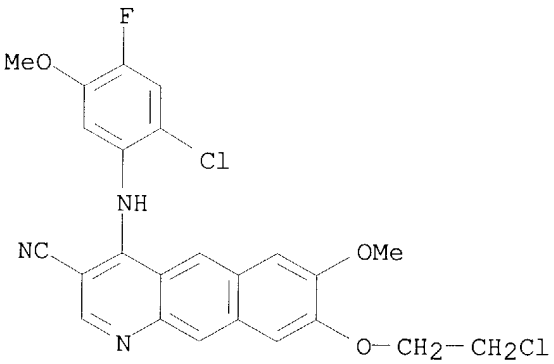


RN 348618-88-2 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 8-(2-chloroethoxy)-4-[(4-chloro-5-

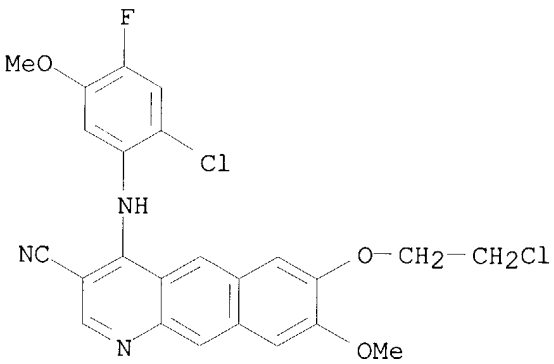
methoxy-2-methylphenyl)amino]-7-ethoxy- (9CI) (CA INDEX NAME)



RN 348618-89-3 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 8-(2-chloroethoxy)-4-[(2-chloro-4-fluoro-5-methoxyphenyl)amino]-7-methoxy- (9CI) (CA INDEX NAME)

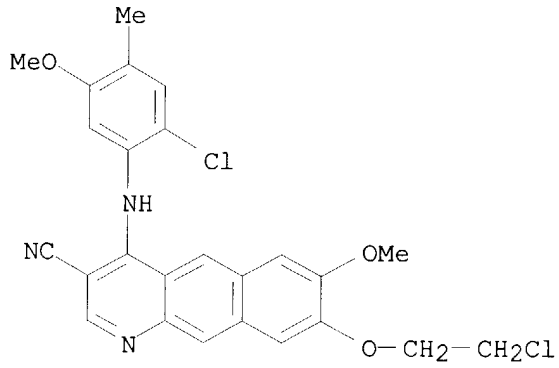


RN 348618-90-6 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 7-(2-chloroethoxy)-4-[(2-chloro-4-fluoro-5-methoxyphenyl)amino]-8-methoxy- (9CI) (CA INDEX NAME)

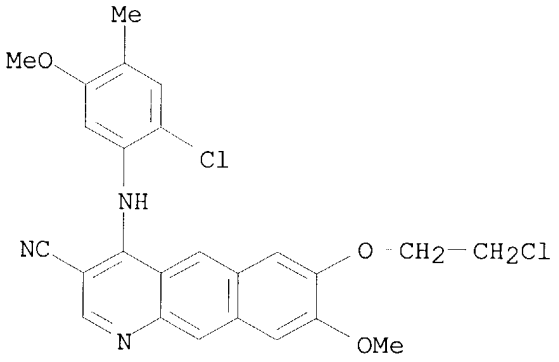


RN 348618-91-7 HCAPLUS

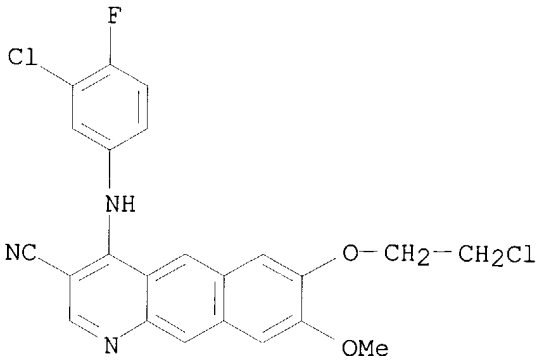
CN Benzo[g]quinoline-3-carbonitrile, 8-(2-chloroethoxy)-4-[(2-chloro-5-methoxy-4-methylphenyl)amino]-7-methoxy- (9CI) (CA INDEX NAME)



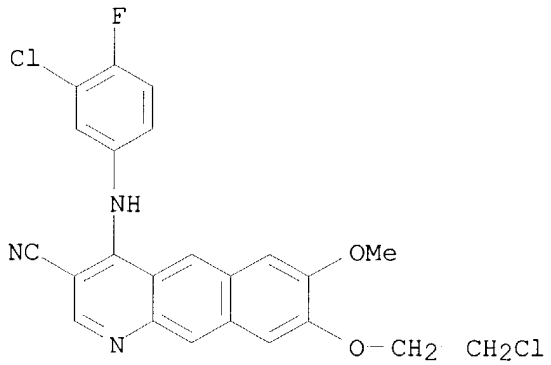
RN 348618-92-8 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 7-(2-chloroethoxy)-4-[(2-chloro-5-methoxy-4-methylphenyl)amino]-8-methoxy- (9CI) (CA INDEX NAME)



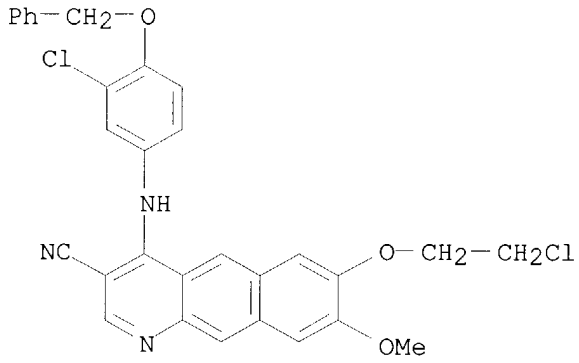
RN 348618-93-9 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 7-(2-chloroethoxy)-4-[(3-chloro-4-fluorophenyl)amino]-8-methoxy- (9CI) (CA INDEX NAME)



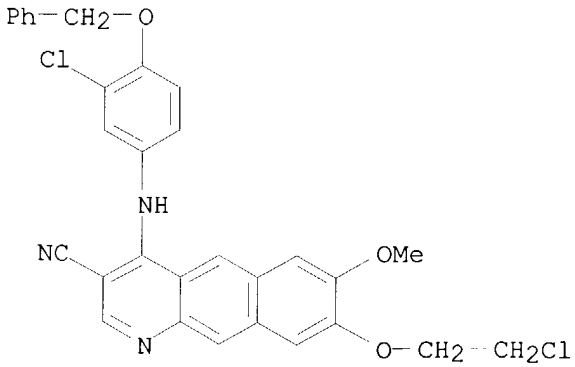
RN 348618-94-0 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 8-(2-chloroethoxy)-4-[(3-chloro-4-fluorophenyl)amino]-7-methoxy- (9CI) (CA INDEX NAME)



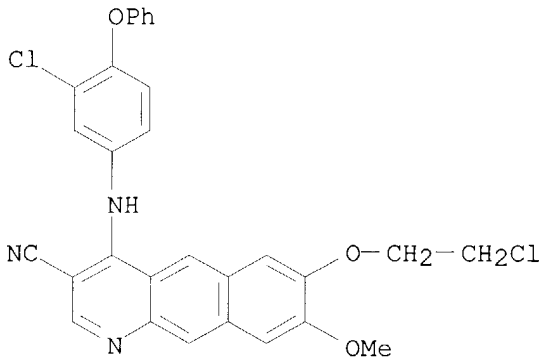
RN 348618-95-1 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 7-(2-chloroethoxy)-4-[[3-chloro-4-(phenylmethoxy)phenyl]amino]-8-methoxy- (9CI) (CA INDEX NAME)



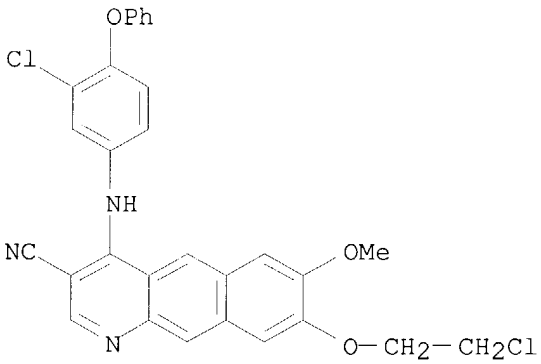
RN 348618-96-2 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 8-(2-chloroethoxy)-4-[[3-chloro-4-(phenylmethoxy)phenyl]amino]-7-methoxy- (9CI) (CA INDEX NAME)



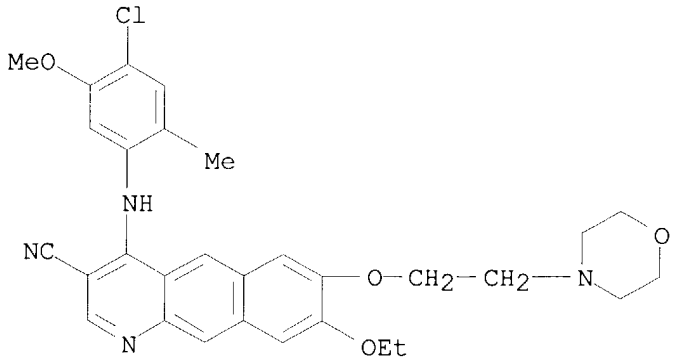
RN 348618-97-3 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 7-(2-chloroethoxy)-4-[(3-chloro-4-phenoxyphenyl)amino]-8-methoxy- (9CI) (CA INDEX NAME)



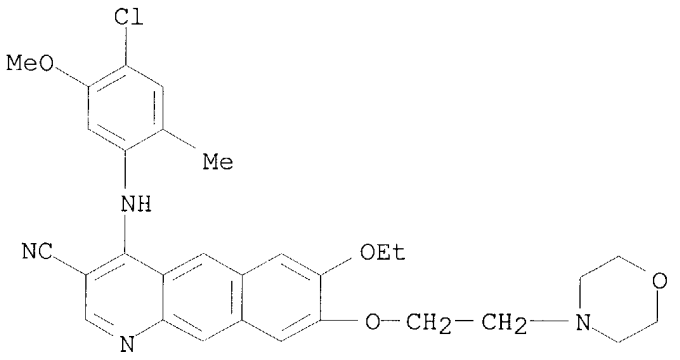
RN 348618-98-4 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 8-(2-chloroethoxy)-4-[(3-chloro-4-phenoxyphenyl)amino]-7-methoxy- (9CI) (CA INDEX NAME)



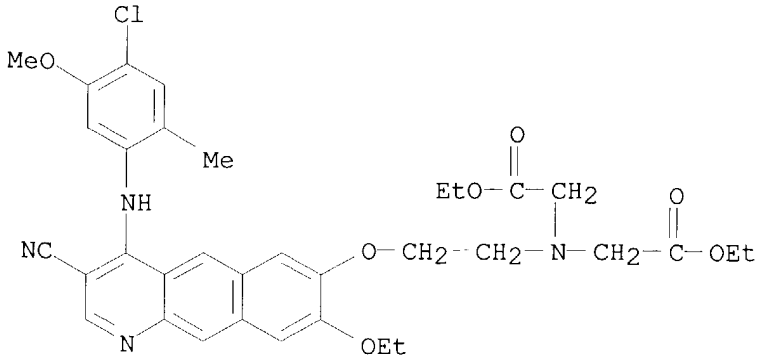
RN 348618-99-5 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(4-chloro-5-methoxy-2-methylphenyl)amino]-8-ethoxy-7-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)



RN 348619-00-1 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(4-chloro-5-methoxy-2-methylphenyl)amino]-7-ethoxy-8-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)

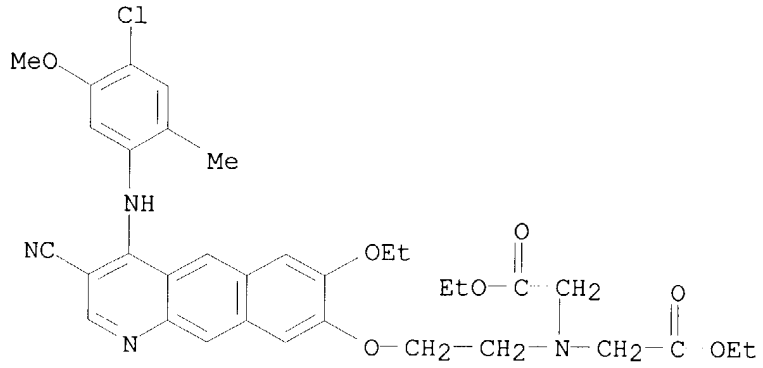


RN 348619-01-2 HCAPLUS
CN Glycine, N-[2-[[4-[(4-chloro-5-methoxy-2-methylphenyl)amino]-3-cyano-8-ethoxybenzo[g]quinolin-7-yl]oxy]ethyl]-N-(2-ethoxy-2-oxoethyl)-, ethyl ester (9CI) (CA INDEX NAME)

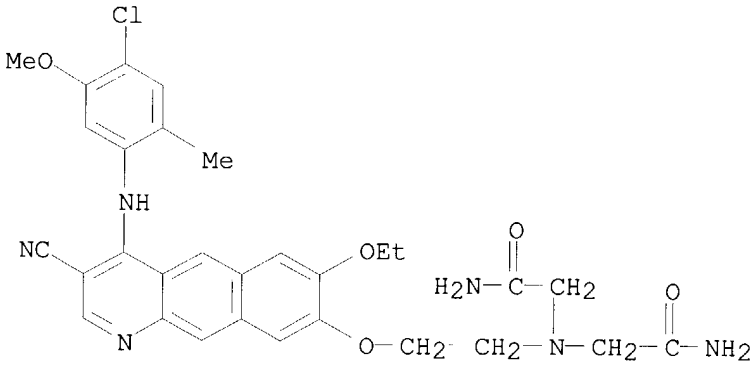


RN 348619-02-3 HCAPLUS

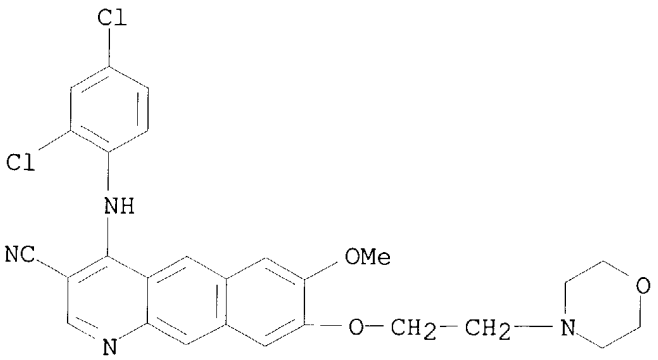
CN Glycine, N-[2-[[4-[(4-chloro-5-methoxy-2-methylphenyl)amino]-3-cyano-7-ethoxybenzo[g]quinolin-8-yl]oxy]ethyl]-N-(2-ethoxy-2-oxoethyl)-, ethyl ester (9CI) (CA INDEX NAME)



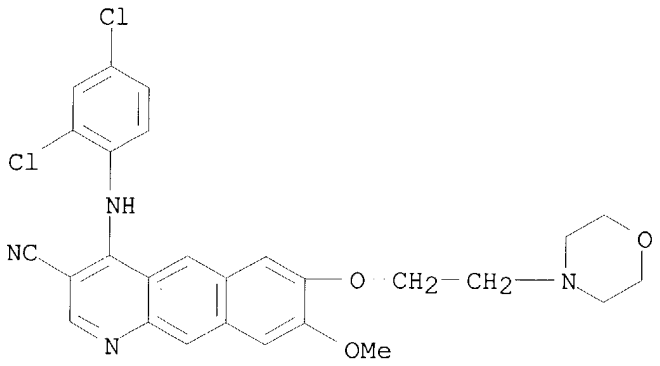
RN 348619-03-4 HCAPLUS
CN Acetamide, 2,2'-[[2-[[4-[(4-chloro-5-methoxy-2-methylphenyl)amino]-3-cyano-7-ethoxybenzo[g]quinolin-8-yl]oxy]ethyl]imino]bis- (9CI) (CA INDEX NAME)



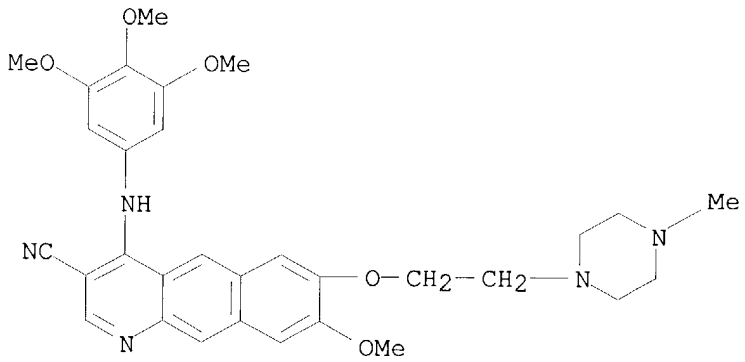
RN 348619-04-5 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichlorophenyl)amino]-7-methoxy-8-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)



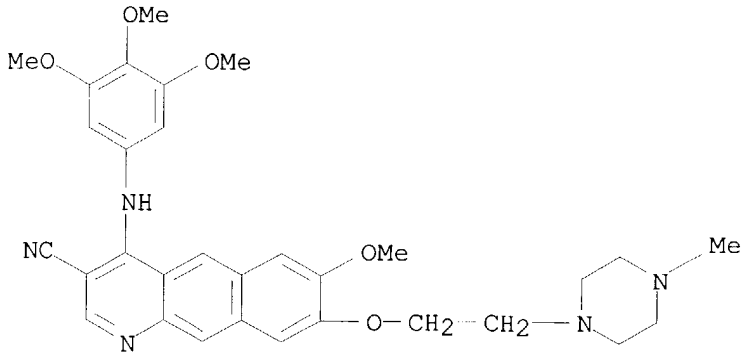
RN 348619-05-6 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichlorophenyl)amino]-8-methoxy-7-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)



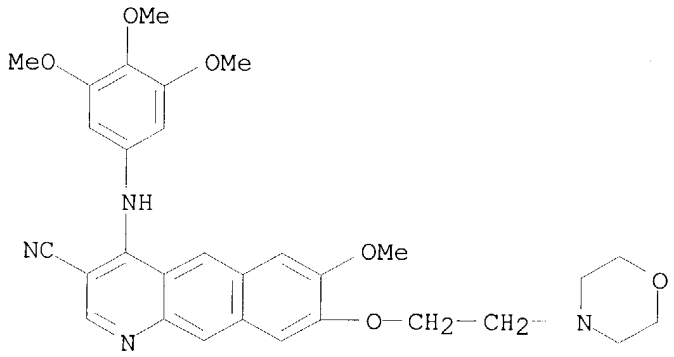
RN 348619-06-7 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 8-methoxy-7-[2-(4-methyl-1-piperazinyl)ethoxy]-4-[(3,4,5-trimethoxyphenyl)amino]- (9CI) (CA INDEX NAME)



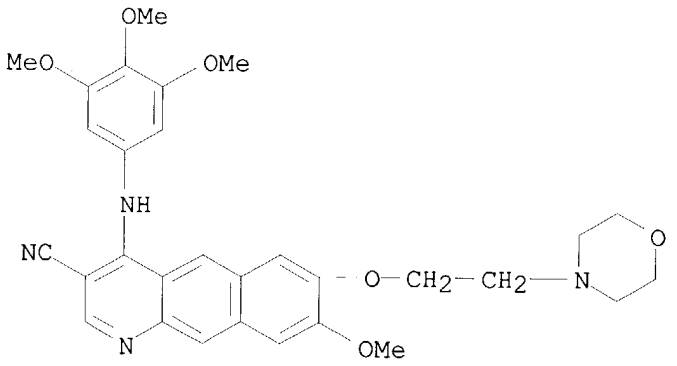
RN 348619-07-8 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 7-methoxy-8-[2-(4-methyl-1-piperazinyl)ethoxy]-4-[(3,4,5-trimethoxyphenyl)amino]- (9CI) (CA INDEX NAME)



RN 348619-08-9 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 7-methoxy-8-[2-(4-morpholinyl)ethoxy]-4-[(3,4,5-trimethoxyphenyl)amino]- (9CI) (CA INDEX NAME)

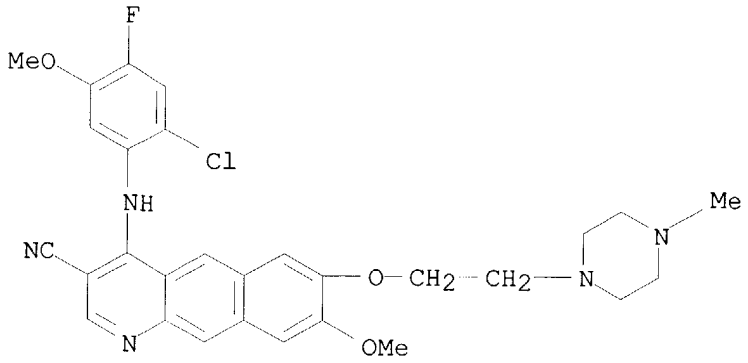


RN 348619-09-0 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 8-methoxy-7-[2-(4-morpholinyl)ethoxy]-4-[(3,4,5-trimethoxyphenyl)amino]- (9CI) (CA INDEX NAME)

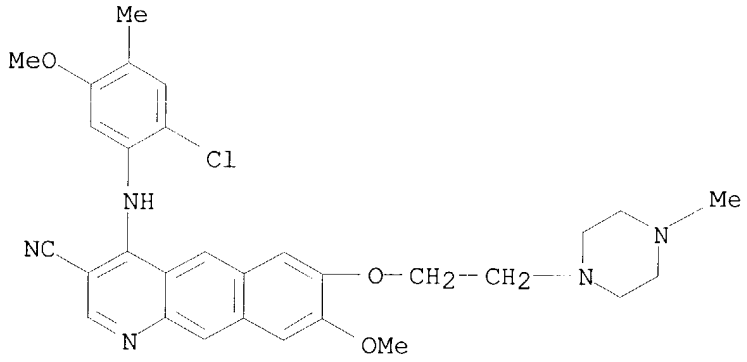


RN 348619-10-3 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2-chloro-4-fluoro-5-methoxyphenyl)amino]-8-methoxy-7-[2-(4-methyl-1-piperazinyl)ethoxy]- (9CI)

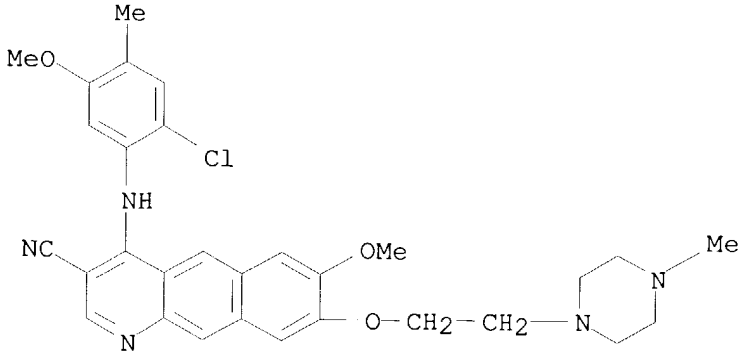
(CA INDEX NAME)



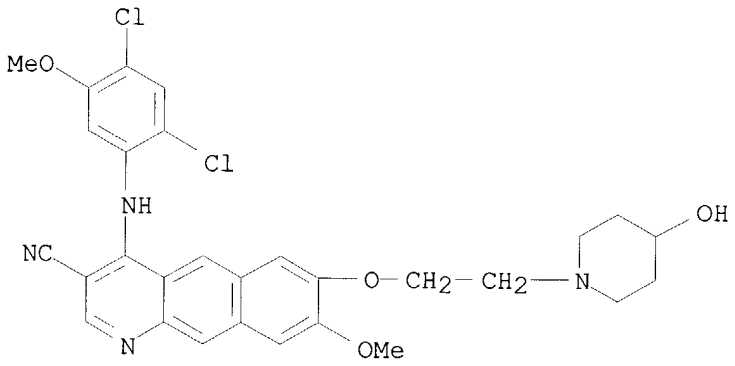
RN 348619-11-4 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2-chloro-5-methoxy-4-methylphenyl)amino]-8-methoxy-7-[2-(4-methyl-1-piperazinyl)ethoxy]- (9CI) (CA INDEX NAME)



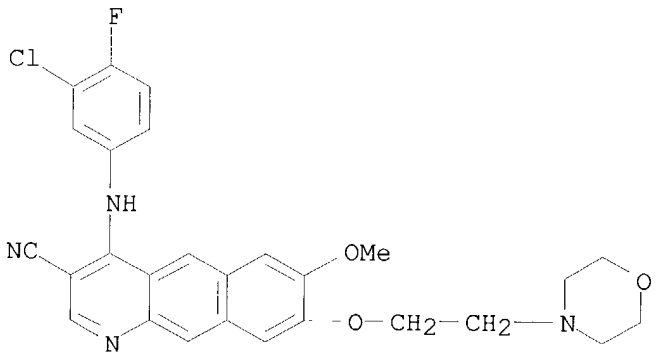
RN 348619-12-5 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2-chloro-5-methoxy-4-methylphenyl)amino]-7-methoxy-8-[2-(4-methyl-1-piperazinyl)ethoxy]- (9CI) (CA INDEX NAME)



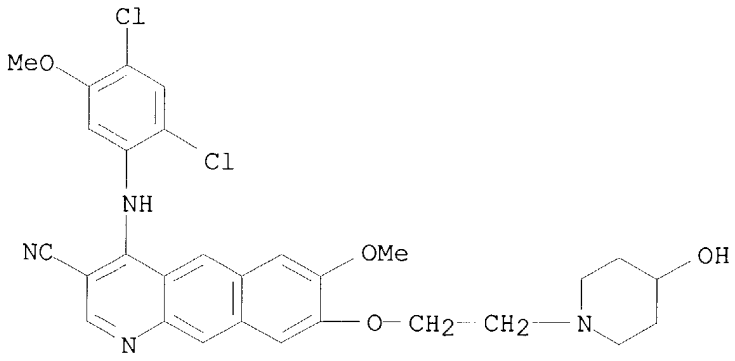
RN 348619-13-6 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichloro-5-methoxyphenyl)amino]-7-[2-(4-hydroxy-1-piperidinyl)ethoxy]-8-methoxy- (9CI) (CA INDEX NAME)



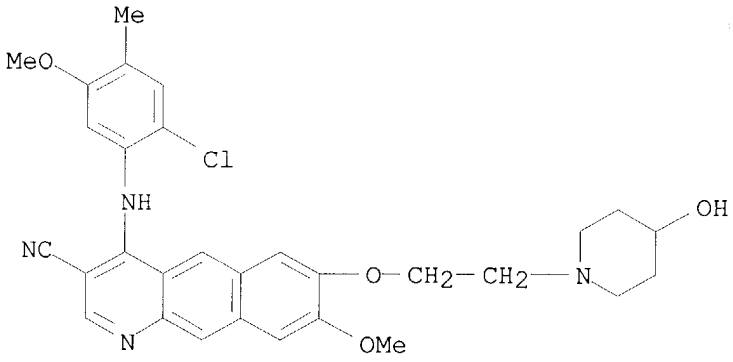
RN 348619-14-7 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(3-chloro-4-fluorophenyl)amino]-7-methoxy-8-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)



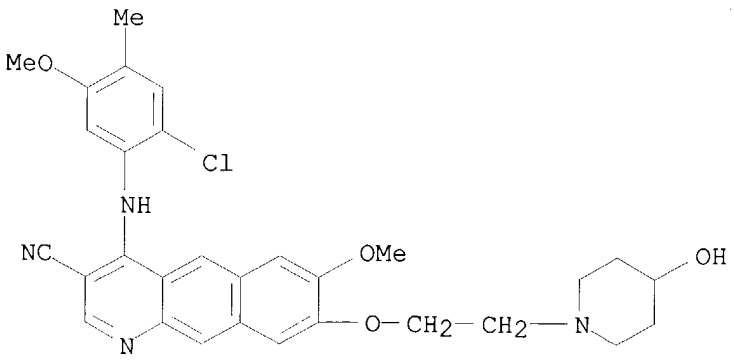
RN 348619-15-8 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2,4-dichloro-5-methoxyphenyl)amino]-8-[2-(4-hydroxy-1-piperidinyl)ethoxy]-7-methoxy- (9CI) (CA INDEX NAME)



RN 348619-16-9 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2-chloro-5-methoxy-4-methylphenyl)amino]-7-[2-(4-hydroxy-1-piperidinyl)ethoxy]-8-methoxy- (9CI) (CA INDEX NAME)

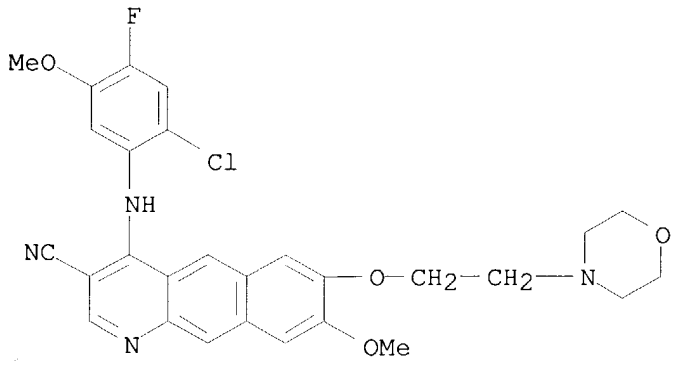


RN 348619-17-0 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2-chloro-5-methoxy-4-methylphenyl)amino]-8-[2-(4-hydroxy-1-piperidinyl)ethoxy]-7-methoxy- (9CI) (CA INDEX NAME)

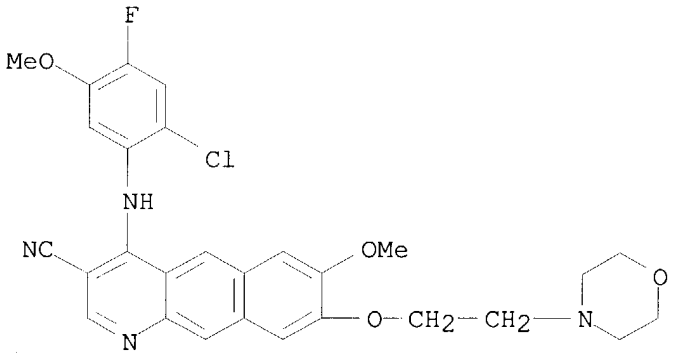


RN 348619-18-1 HCAPLUS

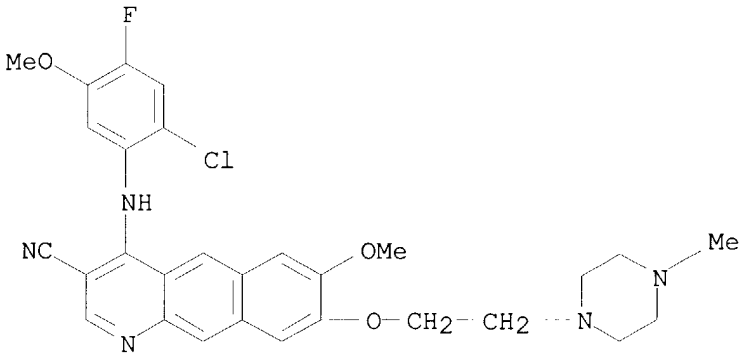
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2-chloro-4-fluoro-5-methoxyphenyl)amino]-8-methoxy-7-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)



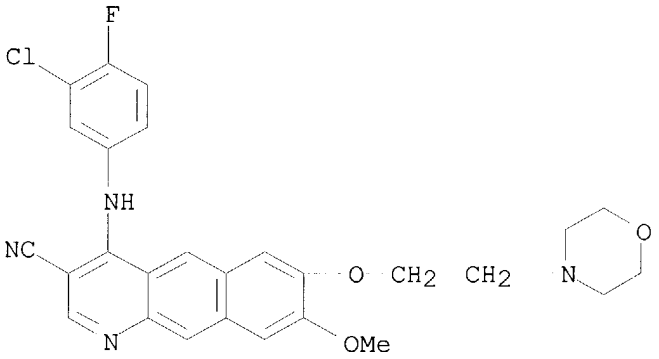
RN 348619-19-2 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2-chloro-4-fluoro-5-methoxyphenyl)amino]-7-methoxy-8-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)



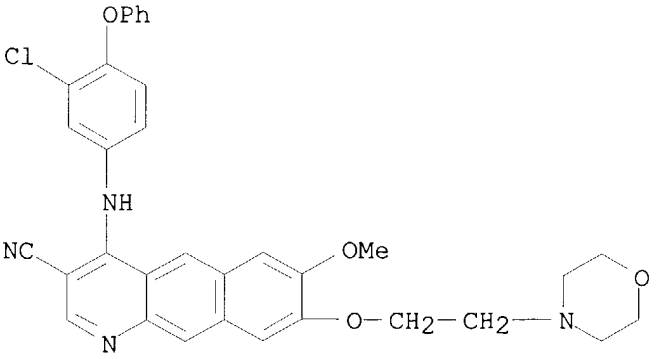
RN 348619-20-5 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2-chloro-4-fluoro-5-methoxyphenyl)amino]-7-methoxy-8-[2-(4-methyl-1-piperazinyl)ethoxy]- (9CI) (CA INDEX NAME)



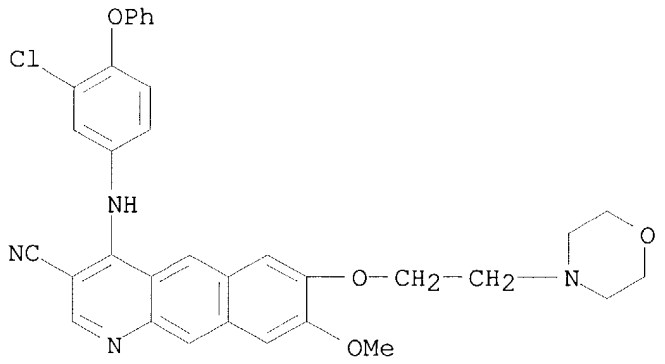
RN 348619-21-6 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(3-chloro-4-fluorophenyl)amino]-8-methoxy-7-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)



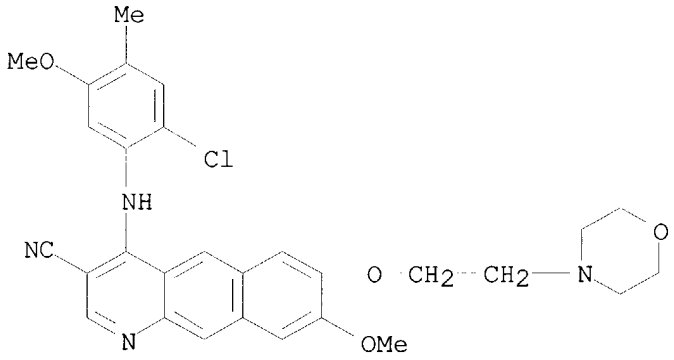
RN 348619-22-7 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(3-chloro-4-phenoxyphenyl)amino]-7-methoxy-8-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)



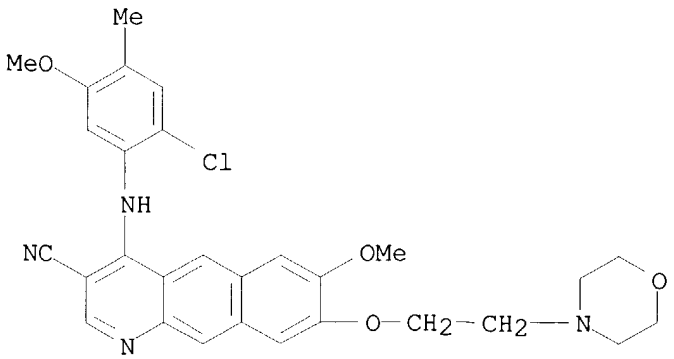
RN 348619-23-8 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(3-chloro-4-phenoxyphenyl)amino]-8-methoxy-7-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)



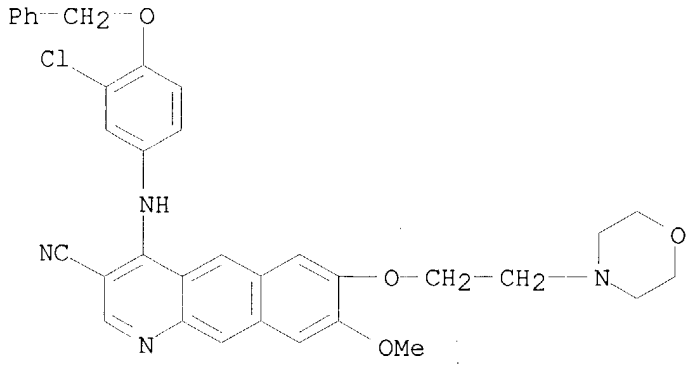
RN 348619-24-9 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2-chloro-5-methoxy-4-methylphenyl)amino]-8-methoxy-7-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)



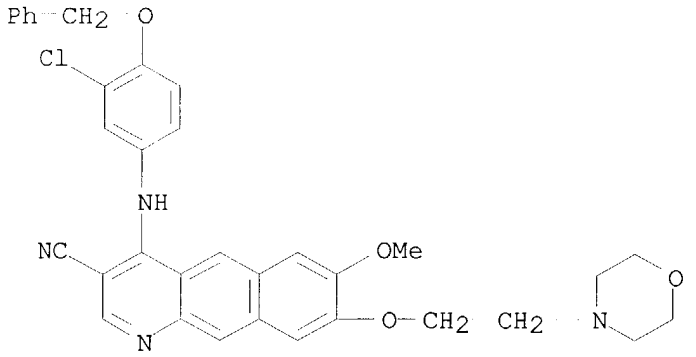
RN 348619-25-0 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2-chloro-5-methoxy-4-methylphenyl)amino]-7-methoxy-8-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)



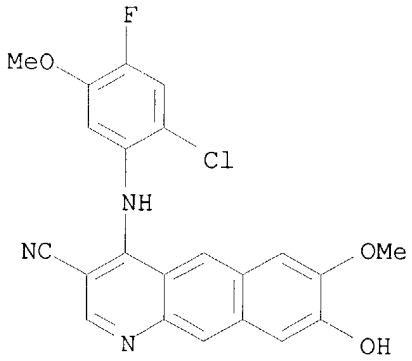
RN 348619-26-1 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[[3-chloro-4-(phenylmethoxy)phenyl]amino]-8-methoxy-7-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)



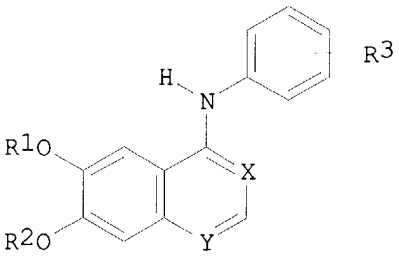
RN 348619-27-2 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[[3-chloro-4-(phenylmethoxy)phenyl]amino]-7-methoxy-8-[2-(4-morpholinyl)ethoxy]- (9CI) (CA INDEX NAME)



RN 348619-29-4 HCAPLUS
CN Benzo[g]quinoline-3-carbonitrile, 4-[(2-chloro-4-fluoro-5-methoxyphenyl)amino]-8-hydroxy-7-methoxy- (9CI) (CA INDEX NAME)



L7 ANSWER 12 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:543462 HCAPLUS
DN 133:237831
ED Entered STN: 09 Aug 2000
TI 4-Anilino-6,7-dialkoxyquinoline-3-carbonitrile inhibitors of epidermal growth factor receptor kinase and their bioisosteric relationship to the 4-anilino-6,7-dialkoxyquinazoline inhibitors
AU Wissner, Allan; Berger, Dan M.; Boschelli, Diane H.; Floyd, M. Brawner Jr.; Greenberger, Lee M.; Gruber, Brian C.; Johnson, Bernard D.; Mamuya, Nellie; Nilakantan, Ramaswamy; Reich, Marvin F.; Shen, Ru; Tsou, Hwei-Ru; Upeslacis, Erik; Wang, Yu Fen; Wu, Biqi; Ye, Fei; Zhang, Nan
CS A Division of American Home Products, Wyeth-Ayerst Research, Pearl River, NY, 10965-1215, USA
SO Journal of Medicinal Chemistry (2000), 43(17), 3244-3256
CODEN: JMCMAR; ISSN: 0022-2623
PB American Chemical Society
DT Journal
LA English
CC 27-17 (Heterocyclic Compounds (One Hetero Atom))
Section cross-reference(s): 1, 7
OS CASREACT 133:237831
GI



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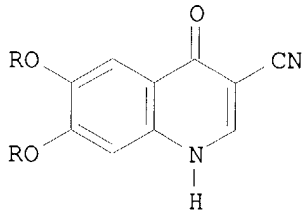

II

AB The synthesis and SAR (structure-activity relationship) of a series of 4-anilino-6,7-dialkoxyquinoline-3-carbonitrile inhibitors of epidermal growth factor receptor (EGF-R) kinase, I [R1 = Me, Et, MeOCH2, MeO(CH2)2, R2 = H, Et, MeO(CH2)2, etc.; R1R2 = CH2, CH2CH2,(CH2)3, R3 = 3-Br, 4-F, 3-NHAc, etc., X = CCO2Et, N, CCN, etc., Y = N, CCN], are described. Condensation of 3,4-dialkoxyanilines with Et (ethoxymethylene)cyanoacetate

followed by thermal cyclization gave, regiospecifically, 6,7-dialkoxy-4-oxo-1,4-dihydroquinoline-3-carbonitriles, e.g. II (R = Et, Me). Chlorination (POCl3) followed by the reaction with substituted anilines furnished the 4-anilino-6,7-dialkoxyquinoline-3-carbonitrile inhibitors of EGF-R kinase. An alternate synthesis of these compds. starts with a Me 3,4-dialkoxybenzoate. Nitration followed by reduction (Fe, NH4Cl, MeOH-H2O) gave a Me 2-amino-4,5-dialkoxybenzoate. Amidine formation using DMF-acetal followed by cyclization using LiCH2CN furnished a 6,7-dialkoxy-4-oxo-1,4-dihydroquinoline-3-carbonitrile, which was transformed as before. Compds. containing acid, ester, amide, carbinol, and aldehyde groups at the 3-position of the quinoline ring were also prepared for comparison, as were several 1-anilino-6,7-dimethoxyisoquinoline-4-carbonitriles. The compds. were evaluated for their ability to inhibit the autophosphorylation of the catalytic domain of EGF-R. The SAR of these inhibitors with respect to the nature of the 6,7-alkoxy groups, the aniline substituents, and the substituent at the 3-position was studied. The compds. were further evaluated for their ability to inhibit the growth of cell lines that overexpress EGF-R or HER-2. It was found that 4-anilinoquinoline-3-carbonitriles are effective inhibitors of EGF-R kinase with activity comparable to the 4-anilinoquinazoline-based inhibitors. A new homol. model of EGF-R kinase was constructed based on the X-ray structures of Hck and FGF receptor-1 kinase. The model suggests that with the quinazoline-based inhibitors, the N3 atom is hydrogen-bonded to a water mol. which, in turn, interacts with Thr 830. It is proposed that the quinoline-3-carbonitriles bind in a similar manner where the water mol. is displaced by the cyano group which interacts with the same Thr residue.

ST anilinoquinolinecarbonitrile epidermal growth factor kinase inhibitor; quinolinecarbonitrile prepn epidermal growth factor kinase inhibitor; structure activity anilinoquinolinecarbonitrile growth factor kinase inhibiting

IT Phosphorylation, biological
(autophosphorylation, inhibitors; preparation, EGF-R kinase inhibitory activity, and structure-activity relationship of anilinoquinolinecarbonitrile derivs.)

IT Structure-activity relationship
(epidermal growth factor kinase-inhibiting; preparation, EGF-R kinase inhibitory activity, and structure-activity relationship of anilinoquinolinecarbonitrile derivs.)

IT Antitumor agents
(preparation, EGF-R kinase inhibitory activity, and structure-activity relationship of anilinoquinolinecarbonitrile derivs.)

IT Epidermal growth factor receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(preparation, EGF-R kinase inhibitory activity, and structure-activity relationship of anilinoquinolinecarbonitrile derivs.)

IT 153436-54-5
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(mol. modeling study; EGF-R kinase inhibitory activity, and structure-activity relationship of anilinoquinolinecarbonitrile derivs.)

IT 214488-80-9P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)
(mol. modeling study; preparation, EGF-R kinase inhibitory activity, and

structure-activity relationship of anilinoquinolinecarbonitrile derivs.)

IT 214470-41-4P 214470-49-2P 214484-25-0P 214486-09-6P 294175-27-2P
294175-28-3P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)
(preparation, EGF-R kinase inhibitory activity, and structure-activity relationship of anilinoquinolinecarbonitrile derivs.)

IT 214470-50-5P 214484-23-8P **214484-26-1P** 214484-27-2P
214484-28-3P 214484-29-4P 214484-31-8P 214484-32-9P 214484-33-0P
214484-44-3P 214484-67-0P 214484-68-1P 214485-39-9P 214485-81-1P
214485-95-7P 214485-96-8P 214485-97-9P 214486-01-8P 214486-10-9P
214486-27-8P 214486-52-9P 214486-63-2P 214486-72-3P 214486-73-4P
214486-92-7P 294175-12-5P 294175-13-6P 294175-14-7P 294175-15-8P
294175-16-9P 294175-17-0P 294175-18-1P 294175-19-2P 294175-20-5P
294175-21-6P 294175-22-7P 294175-23-8P 294175-24-9P 294175-25-0P
294175-26-1P **294175-29-4P** 294175-30-7P 294175-31-8P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation, EGF-R kinase inhibitory activity, and structure-activity relationship of anilinoquinolinecarbonitrile derivs.)

IT 79079-06-4, EGF-R kinase
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(preparation, EGF-R kinase inhibitory activity, and structure-activity relationship of anilinoquinolinecarbonitrile derivs.)

IT 94-05-3, Ethyl (ethoxymethylene)cyanoacetate 95-74-9,
3-Chloro-4-methylaniline 95-85-2, 5-Chloro-2-hydroxyaniline 98-16-8,
3-(Trifluoromethyl)aniline 99-03-6, 3-Acetylaniline 99-88-7,
4-Isopropylaniline 106-40-1, 4-Bromoaniline 108-45-2,
1,3-Phenylenediamine, reactions 367-21-5, 3-Chloro-4-fluoroaniline
367-24-8, 4-Bromo-2-fluoroaniline 371-40-4, 4-Fluoroaniline 372-19-0,
3-Fluoroaniline 591-19-5, 3-Bromoaniline 591-27-5, 3-Hydroxyaniline
615-36-1, 2-Bromoaniline 643-28-7, 2-Isopropylaniline 1783-81-9,
3-(Methylthio)aniline 2237-30-1, 3-Cyanoaniline 2357-47-3,
4-Fluoro-3-trifluoromethylaniline 3544-24-9, 3-Aminobenzamide
3575-32-4, N,N-Dimethyl-1,3-phenylenediamine dihydrochloride 3943-74-6
3964-52-1, 4-Amino-2-chlorophenol 5369-16-4, 3-Isopropylaniline
5930-28-9, 3,5-Dichloro-4-hydroxyaniline 6315-89-5, 3,4-Dimethoxyaniline
6702-50-7 6933-10-4, 4-Bromo-3-methylaniline 7745-91-7,
3-Bromo-4-methylaniline 18029-61-3 20197-75-5 26893-14-1
55289-36-6, 3-Bromo-2-methylaniline 57946-56-2, 4-Chloro-2-fluoroaniline
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation, EGF-R kinase inhibitory activity, and structure-activity relationship of anilinoquinolinecarbonitrile derivs.)

IT 3535-24-8P 20197-76-6P 30199-65-6P 50413-49-5P 52791-03-4P
97966-31-9P 214470-52-7P 214470-55-0P 214470-75-4P 214470-78-7P
214470-85-6P 214470-90-3P 214475-98-6P 214475-99-7P 214476-04-7P
214476-71-8P 263171-63-7P 263171-64-8P 294175-34-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation, EGF-R kinase inhibitory activity, and structure-activity relationship of anilinoquinolinecarbonitrile derivs.)

IT 214486-99-4P 294175-33-0P 294175-35-2P **294175-36-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation, EGF-R kinase inhibitory activity, and structure-activity relationship of anilinoquinolinecarbonitrile derivs.)

RE.CNT 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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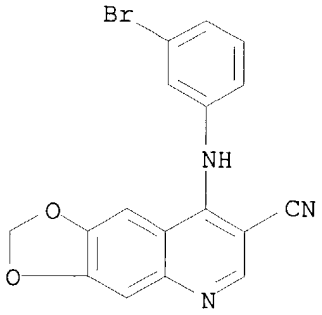
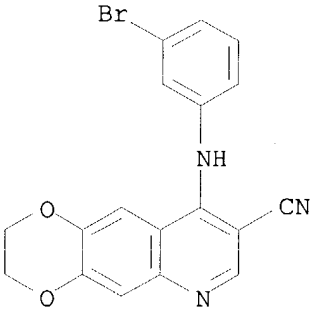
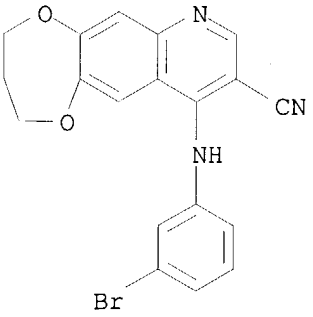
IT **214484-26-1P 294175-26-1P 294175-29-4P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation, EGF-R kinase inhibitory activity, and structure-activity relationship of anilinoquinolinecarbonitrile derivs.)
RN 214484-26-1 HCAPLUS
CN 1,3-Dioxolo[4,5-g]quinoline-7-carbonitrile, 8-[(3-bromophenyl)amino]- (9CI) (CA INDEX NAME)



RN 294175-26-1 HCAPLUS
CN 1,4-Dioxino[2,3-g]quinoline-8-carbonitrile, 9-[(3-bromophenyl)amino]-2,3-dihydro- (9CI) (CA INDEX NAME)



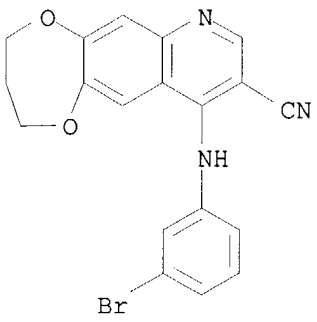
RN 294175-29-4 HCAPLUS
CN 2H-[1,4]Dioxepino[2,3-g]quinoline-9-carbonitrile, 10-[(3-bromophenyl)amino]-3,4-dihydro- (9CI) (CA INDEX NAME)



IT **294175-36-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation, EGF-R kinase inhibitory activity, and structure-activity relationship of anilinoquinolinecarbonitrile derivs.)
RN 294175-36-3 HCAPLUS
CN 2H-[1,4]Dioxepino[2,3-g]quinoline-9-carbonitrile, 10-[(3-bromophenyl)amino]-3,4-dihydro-, monoacetate (9CI) (CA INDEX NAME)

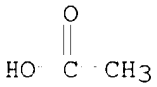
CM 1

CRN 294175-29-4
CMF C19 H14 Br N3 O2



CM 2

CRN 64-19-7
CMF C2 H4 O2



L7 ANSWER 13 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:794373 HCAPLUS
DN 132:35620
ED Entered STN: 16 Dec 1999
TI Preparation of substituted 3-cyanoquinolines as inhibitors of growth factor receptor protein tyrosine kinases (PTK)
IN Wissner, Allan; Johnson, Bernard D.; Reich, Marvin F.; Floyd, Middleton B., Jr.; Kitchen, Douglas B.; Tsou, Hwei-ru
PA American Cyanamid Co., USA
SO U.S., 80 pp.
CODEN: USXXAM
DT Patent
LA English
IC ICM A01A043-42
ICS C07D215-16; C07D215-38
NCL 546160000
CC 27-17 (Heterocyclic Compounds (One Hetero Atom))
Section cross-reference(s): 1, 7
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 6002008	A	19991214	US 1998-49718	19980327
PRAI US 1997-41963P	P	19970403		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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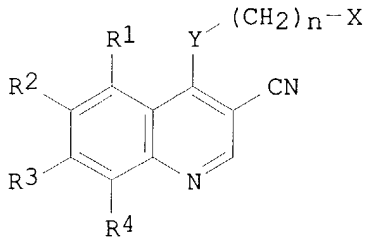
	ICS	C07D215-16; C07D215-38

NCL 546160000
OS MARPAT 132:35620
GI



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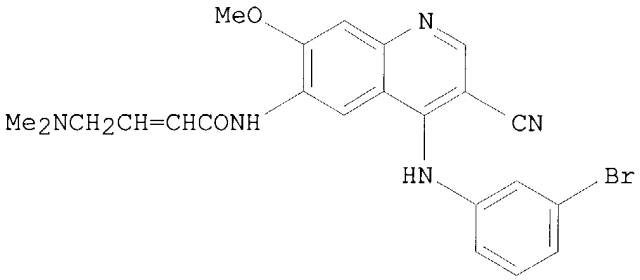

II

AB This invention provides compds. having the formula (I; wherein: X is cycloalkyl which may be optionally substituted; or is a pyridinyl, pyrimidinyl, or Ph ring; wherein the pyridinyl, pyrimidinyl, or Ph ring may be optionally substituted; n is 0-1; Y is NH, O, S, or NR; R is alkyl of 1-6 carbon atoms; R1, R2, R3, and R4 are each, independently, hydrogen, halogen, alkyl, alkenyl, alkynyl, alkenyloxy, alkynoyloxy, hydroxymethyl, halomethyl, alkanoyloxy, alkenoyloxy, alkynyloxy, alkanoyloxymethyl, alkenoyloxymethyl, alkynoyloxymethyl, alkoxymethyl, alkoxy, alkylthio, alkylsulphinyl, alkylsulfonyl, alkylsulfonamido, alkenylsulfonamido, alkynylsulfonamido, hydroxy, trifluoromethyl, cyano, nitro, carboxy, carboalkoxy, carboalkyl, phenoxy, Ph, thiophenoxy, benzyl, amino, hydroxyamino, alkoxyamino, alkylamino, dialkylamino, aminoalkyl, N-alkylaminoalkyl, N,N-dialkylaminoalkyl, phenylamino, benzylamino, etc.; R5 is alkyl which may be optionally substituted, or Ph which may be optionally substituted; R6 is hydrogen, alkyl, or alkenyl; R7 is chloro or bromo; R8 is hydrogen, alkyl, aminoalkyl, N-alkylaminoalkyl, N,N-dialkylaminoalkyl, N-cycloalkylaminoalkyl, N-cycloalkyl-N-alkylaminoalkyl, N,N-dicycloalkylaminoalkyl, morpholino-N-alkyl, piperidino-N-alkyl, N-alkyl-piperidino-N-alkyl, azacycloalkyl-N-alkyl, hydroxyalkyl, alkoxyalkyl, carboxy, carboalkoxy, Ph, carboalkyl, chloro, fluoro, or bromo; Z is amino, hydroxy, alkoxy, alkylamino, dialkylamino). The compds. of the present invention inhibit the action of certain growth factor receptor protein tyrosine kinases (PTK) thereby inhibiting the abnormal growth of certain cell types. They are therefore useful for the treatment of certain diseases that are the result of deregulation of these PTKs, in particular as anti-cancer agents for the treatment of cancers expressing epidermal growth factor receptor (EGFR), mitogen activated protein kinase (MAPK), epithelial kinase (ECK), and kinase insert domain

containing receptor (KDR) in mammals and for the treatment of polycystic kidney disease in mammals. Thus, To a mixture of 1.9 g (5.1 mmol) of 4-[(3-bromophenyl)amino]-7-methoxy-6-amino-3-quinolinecarbonitrile and 5.3 mL (31 mmol) of Hunig's base in 110 mL of dry THF at 0° C., with stirring, was added a THF solution containing 5.7 g (31 mmol) of 4-bromocrotonyl chloride dropwise. The mixture was stirred for addnl. 0.5 h. After addition 100 mL of saturated sodium chloride solution was added to the reaction mixture, then it was extracted with Et acetate. The Et acetate solution was dried over sodium sulfate and then was added to 40 mL of di-Me amine solution (2.0 M in THF) at 0° dropwise and stirred an addnl. 0.5 h to give 4-Dimethylamino-but-2-enoic acid [4-(3-bromo-phenylamino)-3-cyano-7-methoxy-quinolin-6-yl]amide (II). II showed IC50 of 0.000008 μM against epidermal growth factor receptor kinase.

ST cyanoquinoline prepn inhibitor growth factor receptor protein tyrosine kinase; anticancer cyanoquinoline prepn; polycystic kidney disease treatment cyanoquinoline

IT Kidney, disease
(polycystic; preparation of substituted 3-cyanoquinolines as inhibitors of growth factor receptor protein tyrosine kinases (PTK) for treatment of cancers and polycystic kidney disease)

IT Antitumor agents
(preparation of substituted 3-cyanoquinolines as inhibitors of growth factor receptor protein tyrosine kinases (PTK) for treatment of cancers and polycystic kidney disease)

IT Epidermal growth factor receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study); PROC (Process)
(preparation of substituted 3-cyanoquinolines as inhibitors of growth factor receptor protein tyrosine kinases (PTK) for treatment of cancers and polycystic kidney disease)

IT 9031-44-1, Kinase
RL: BPR (Biological process); BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study); PROC (Process)
(Epithelial cell; preparation of substituted 3-cyanoquinolines as inhibitors of growth factor receptor protein tyrosine kinases (PTK) for treatment of cancers and polycystic kidney disease)

IT 13436-14-1P 214470-52-7P 214476-70-7P 214484-01-2P 214484-03-4P
214484-09-0P 214484-11-4P 214484-17-0P 214484-20-5P 214484-25-0P
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214486-89-2P 214486-90-5P 214486-97-2P 214487-11-3P 214487-12-4P
214487-14-6P 214487-15-7P 214487-16-8P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of substituted 3-cyanoquinolines as inhibitors of growth factor receptor protein tyrosine kinases (PTK) for treatment of cancers and polycystic kidney disease)

IT 71083-59-5P 214470-72-1P 214470-78-7P 214483-99-5P 214484-05-6P
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214487-01-1P 214487-02-2P 214487-03-3P 214487-04-4P 214487-05-5P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of substituted 3-cyanoquinolines as inhibitors of growth factor receptor protein tyrosine kinases (PTK) for treatment of cancers and polycystic kidney disease)

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214488-80-9P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of substituted 3-cyanoquinolines as inhibitors of growth factor receptor protein tyrosine kinases (PTK) for treatment of cancers and polycystic kidney disease)

IT 142243-02-5, Mitogen activated protein kinase

RL: BPR (Biological process); BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study); PROC (Process)
(preparation of substituted 3-cyanoquinolines as inhibitors of growth factor receptor protein tyrosine kinases (PTK) for treatment of cancers and polycystic kidney disease)

IT 62-53-3, Aniline, reactions 68-12-2, DMF, reactions 74-89-5, Methylamine, reactions 74-97-5, Bromochloromethane 75-03-6, Ethyl iodide 75-05-8, Acetonitrile, reactions 75-36-5, Acetyl chloride 79-03-8, Propionyl chloride 79-04-9, Chloroacetyl chloride 80-41-1, 2-Chloroethyl p-toluene sulfonate 87-13-8, Diethyl ethoxymethylenemalonate 88-68-6, Anthranilamide 94-05-3, Ethyl (ethoxymethylene)cyanoacetate 95-03-4, 5-Chloro-o-anisidine 95-69-2, 4-Chloro-2-methylaniline 95-74-9, 2-Chloro-4-amino-toluene 95-76-1, 3,4-Dichloroaniline 95-84-1, 2-Amino-p-cresol 95-85-2, 2-Amino-4-chlorophenol 97-52-9, 2-Methoxy-4-nitro aniline 98-16-8, 3-(Trifluoromethyl)aniline 99-03-6 99-09-2, 3-Nitroaniline 99-52-5 100-01-6, 4-Nitroaniline, reactions 100-46-9, Benzylamine, reactions 100-61-8, N-Methylaniline, reactions 102-49-8, 3,4-Dichlorobenzylamine 102-50-1, 4-Methoxy-2-methyl-aniline 104-10-9, 4-Aminophenethyl alcohol 104-96-1 106-40-1, p-Bromoaniline 106-44-5, 4-Methylphenol, reactions 106-53-6, 4-Bromothiophenol 107-08-4, 1-Iodopropane 107-30-2, Chloromethyl methyl ether 107-93-7, (E)-But-2-enoic acid 108-24-7, Acetic anhydride 108-42-9, 3-Chloroaniline 108-44-1, 3-Toluidine, reactions 108-45-2, 1,3-Diaminobenzene, reactions 108-91-8, Cyclohexylamine, reactions 109-65-9, 1-Bromobutane 109-89-7, Diethylamine, reactions 110-91-8, Morpholine, reactions 124-40-3, Dimethylamine, reactions 134-20-3, Methyl anthranilate 139-59-3, 4-Phenoxyaniline 141-75-3, Butyryl chloride 320-51-4, 4-Chloro-3-trifluoromethylaniline 348-62-9, 4-Chloro-2-fluoro phenol 363-81-5, 2,4,6-Trifluoro-aniline 367-21-5, 3-Chloro-4-fluoroaniline 371-40-4, 4-Fluoroaniline 372-19-0, 3-Fluoroaniline 452-69-7, 4-Fluoro-3-methylaniline 455-14-1, 4-(Trifluoromethyl)aniline 462-08-8, 3-Amino-pyridine 496-73-1 536-46-9, 4-Dimethylaminoaniline dihydrochloride 536-90-3, 3-Methoxyaniline 589-16-2, 4-Ethylaniline 590-93-2, 2-Butynoic acid 591-19-5, 3-Bromoaniline 591-20-8, 3-Bromophenol 591-27-5, 3-Aminophenol 598-21-0, Bromoacetyl bromide 609-21-2, 4-Amino-2,6-dibromophenol 615-55-4, 3,4-Dibromoaniline 621-33-0, 3-Ethoxy aniline 626-01-7, 3-Iodoaniline 632-02-0, 3-Chloropropyl p-toluenesulfonate 645-08-9, 3-Hydroxy-4-methoxybenzoic acid 656-64-4, 3-Bromo-4-fluoroaniline 814-68-6, Acryloyl chloride 920-46-7, Methacryloyl chloride 1535-73-5, 3-Trifluoromethoxyaniline 1609-93-4, cis-3-Chloro acrylic acid 1687-53-2, 5-Amino-2-methoxyphenol 1783-81-9, 3-(Methylthio)aniline 1877-77-6, 3-Aminobenzyl alcohol 2170-03-8, Itaconic anhydride 2237-30-1, 3-Aminobenzonitrile 2835-68-9, 4-Amino-benzamide 2835-95-2, 3-Hydroxy-4-methyl-aniline 2835-97-4 2835-98-5, 6-Amino-m-cresol 2835-99-6, 4-Amino-m-cresol 2987-53-3, 2-(Methylmercapto)aniline 3096-71-7, 4-Amino-2,5-dimethylphenol 3171-45-7 3177-80-8, 2-Amino-3-methoxy-benzoic acid 3544-24-9, 3-Aminobenzamide 3575-32-4 3586-12-7, 3-Phenoxyaniline 3863-11-4, 3,4-Difluoroaniline 3943-74-6 3964-52-1, 4-Amino-2-chlorophenol 4432-44-4 4637-24-5, Dimethylformamide dimethyl acetal 5035-82-5, Methyl 3,4,5-trimethoxyanthranilate 5339-85-5, 2-Aminophenethyl alcohol 5369-16-4, 3-Isopropylaniline 5763-61-1, 3,4-Dimethoxybenzylamine 5930-28-9, 4-Amino-2,6-dichlorophenol 6100-60-3, 3-Hydroxy-4-methoxy phenol 6315-89-5, 4-Aminoveratrole 6482-24-2, 2-Bromoethyl methyl ether 7357-67-7, N-(3-Chloropropyl)-morpholine 7664-41-7, Ammonia, reactions 7745-91-7, 3-Bromo-4-methylaniline 10269-01-9, 3-Bromobenzylamine 10387-40-3, Potassium thioacetate 13066-95-0, 4-Aminoresorcinol 13535-01-8,

3-Amino-5-bromopyridine 13669-62-0 17609-80-2, 4-Amino-3-chlorophenol 20197-71-1 20629-35-0, 4-Bromocrotonic acid 24303-64-8, 4-Methoxy-2-butynoic acid 26628-22-8, Sodium azide 32631-26-8 38346-95-1 38346-97-3 50472-10-1, 2-Amino-3,6-dimethoxybenzoic acid 51544-74-2 52130-17-3, 3-Amino-2-methylbenzoic acid 53222-92-7, 3-Amino-o-cresol 54060-30-9, 3-Ethynylaniline 55120-56-4 57946-56-2, 4-Chloro-2-fluoro-aniline 61882-45-9, 4-Methoxycrotonyl chloride 72235-53-1, 3,4-Difluorobenzylamine 79863-92-6 83647-42-1, 3-Amino-2-methylbenzyl alcohol 84478-72-8, 4-Chloro-2-fluoro-5-hydroxy-aniline 102245-65-8 118764-05-9 124623-36-5 141772-40-9 179688-27-8 184356-52-3 214477-50-6 214477-76-6 214483-18-8 214483-20-2 214487-26-0 214487-27-1 214487-28-2 214487-29-3 214487-30-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of substituted 3-cyanoquinolines as inhibitors of growth factor receptor protein tyrosine kinases (PTK) for treatment of cancers and polycystic kidney disease)

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RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of substituted 3-cyanoquinolines as inhibitors of growth factor receptor protein tyrosine kinases (PTK) for treatment of cancers and polycystic kidney disease)

RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD

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IT **214484-26-1P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of substituted 3-cyanoquinolines as inhibitors of growth factor receptor protein tyrosine kinases (PTK) for treatment of cancers and polycystic kidney disease)
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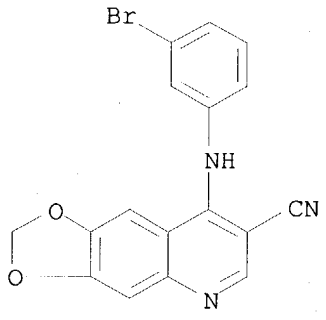

L7 ANSWER 14 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1998:682233 HCAPLUS
DN 129:302564
ED Entered STN: 28 Oct 1998
TI Preparation of substituted 3-cyanoquinolines as inhibitors of protein tyrosine kinase
IN Wissner, Allan; Johnson, Bernard Dean; Reich, Marvin Fred; Floyd, Middleton Brawner, Jr.; Kitchen, Douglas B.; Tsou, Hwei-ru
PA American Cyanamid Co., USA
SO PCT Int. Appl., 223 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C07D215-54
ICS A61K031-47; C07D401-12
CC 27-17 (Heterocyclic Compounds (One Hetero Atom))
Section cross-reference(s): 1
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI WO 9843960 A1 19981008 WO 1998-US6480 19980402
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ZA 9802771 A 19991001 ZA 1998-2771 19980401
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EP 973746 B1 20030924
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, SI, LT, LV, FI, RO
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PRAI US 1997-826604 A 19970403
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CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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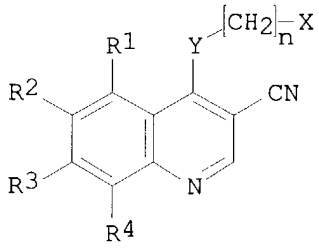
	ICS	A61K031-47; C07D401-12

OS MARPAT 129:302564

GI



I

AB The title compds. [I; X = (un)substituted cycloalkyl, pyridinyl, pyrimidinyl, Ph; n = 0-1; Y = NH, O, S, NR; R = = C1-6 alkyl; R1-R4 = H, halo, alkyl, etc. (with the proviso that when Y = NH; R1-R4 = H; n = O; X is not 2-methylphenyl)], inhibitors of protein tyrosine kinase which are useful in treating, inhibiting the growth of, or eradicating a neoplasm which expresses EGFR, MAPK, ECK or KDR, and in treating polycystic kidney disease, were prepared Thus, treatment of 2-butynoic acid with iso-Bu chloroformate and N-methylmorpholine in THF followed by the addition of this solution of the mixed anhydride to a solution of 6-amino-4-[(3-bromophenyl)amino]-7-methoxy-3-quinolinecarbonitrile (preparation described) in THF over a 24 h period afforded I [Y = NH; n = 0; X = 3-BrC6H4; R1 = R4 =

H; R2 = MeC.tplbond.CC(O)NH; R3 = MeO] which showed IC50 of 0.15 μM against epidermal growth factor receptor kinase (A431 membrane extract).

ST cyanoquinoline prepn protein tyrosine kinase inhibitor; antitumor agent cyanoquinoline prepn; EGFR kinase inhibitor cyanoquinoline prepn; MAPK inhibitor cyanoquinoline prepn; mitogen activated protein kinase cyanoquinoline prepn; KDR catalytic domain VEGF cyanoquinoline prepn; ECK inhibitor cyanoquinoline prepn; polycystic kidney disease cyanoquinoline prepn

IT Vascular endothelial growth factor receptors
RL: BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study)
(inhibition of kinase insert domain containing receptor (KDR; the catalytic domain of the VEGF receptor); preparation of substituted 3-cyanoquinolines as inhibitors of protein tyrosine kinase)

IT Kidney, disease
(polycystic, treatment of; preparation of substituted 3-cyanoquinolines as inhibitors of protein tyrosine kinase)

IT Antitumor agents
(preparation of substituted 3-cyanoquinolines as inhibitors of protein tyrosine kinase)

IT 137632-08-7, Mitogen-activated protein kinase erk2
RL: BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study)
(inhibition of; preparation of substituted 3-cyanoquinolines as inhibitors of protein tyrosine kinase)

IT 79079-06-4, EGFR kinase
RL: BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study)
(inhibitors of; preparation of substituted 3-cyanoquinolines as inhibitors of protein tyrosine kinase)

IT 214484-03-4P 214484-17-0P 214484-20-5P 214484-25-0P 214484-34-1P
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RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of substituted 3-cyanoquinolines as inhibitors of protein tyrosine kinase)

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RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of substituted 3-cyanoquinolines as inhibitors of protein tyrosine kinase)

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214487-24-8P 214487-25-9P 214488-80-9P 214489-60-8P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of substituted 3-cyanoquinolines as inhibitors of protein tyrosine kinase)

IT 80449-02-1, Protein tyrosine kinase
RL: BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study)
(preparation of substituted 3-cyanoquinolines as inhibitors of protein tyrosine kinase)

IT 62-53-3, Benzenamine, reactions 79-03-8, Propionyl chloride 80-41-1, 2-Chloroethyl p-toluenesulfonate 87-13-8, Diethyl ethoxymethylenemalonate 88-68-6, Anthranilamide 94-05-3, Ethyl

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RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of substituted 3-cyanoquinolines as inhibitors of protein

tyrosine kinase)

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RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of substituted 3-cyanoquinolines as inhibitors of protein tyrosine kinase)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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(3) Ife, R; J MED CHEM 1992, V35(18), P3413 HCAPLUS
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(5) Price, C; J AM CHEM SOC 1946, V68, P1246 HCAPLUS
(6) Rewcastle, G; JOURNAL OF MEDICINAL CHEMISTRY 1995, V38(18), P3482 HCAPLUS

IT **214484-26-1P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of substituted 3-cyanoquinolines as inhibitors of protein tyrosine kinase)

RN 214484-26-1 HCAPLUS

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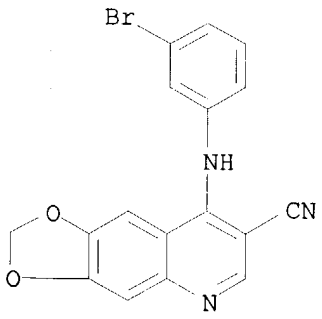

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ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:125798 HCAPLUS
DN 130:184097
TI Laundry detergent compositions comprising a saccharide gum degrading enzyme for cleaning of dingy soils and whitening of fabrics
IN Cooremans, Steven; Bettiol, Jean-luc Philippe; Herbots, Ivan Maurice Alfons Jan; Baeck, Andre Cesar
PA The Procter + Gamble Company, USA
SO Eur. Pat. Appl., 56 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 2

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RE.CNT  7     THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
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=>  D ABS IND

L8   ANSWER 1 OF 1  HCAPLUS  COPYRIGHT 2004 ACS on STN
AB   Laundry detergent compns. and softener compns. comprise a saccharide gum
     degrading enzyme and provide excellent cleaning performance, especially food
     stain/soil removal, whiteness and dingy cleaning of fabrics.  A softener
     contained DEQA 20.0, mannase 0.0008, cellulase 0.001, HCl 0.03, antifoam
     0.01, CaCl2 0.20, perfume 0.90%, blue dye 25 ppm, and the balance water.
IC   ICM  C11D003-386
CC   46-5 (Surface Active Agents and Detergents)
ST   mannase gum degrading enzyme laundry detergent; food gum degrading enzyme
     detergent; fabric softener gum degrading enzyme
IT   Fabric softeners
        (compns. comprising a saccharide gum degrading enzyme)
IT   Enzymes, uses
     RL: MOA (Modifier or additive use); USES (Uses)
        (compns. comprising a saccharide gum degrading enzyme)
IT   Detergents
        (laundry; laundry detergent compns. comprising a saccharide gum
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degrading enzyme)

IT 9001-34-7, Galactosidase 9001-45-0, Glucuronidase 9025-43-8, β-Mannosidase 9032-75-1, Rohapect B1-L 9067-74-7, Endo-α-1,5-arabinosidase 37211-66-8, Mannosidase 37288-54-3, Endo-1,4-β-D-mannosidase 37288-57-6, Agarase 37325-54-5, Arabinanase 60748-69-8, Mannase 64177-88-4, Polyguluronate lyase 69279-17-0 75432-96-1, Arabinanase, endo-1,5-α-L- 95990-27-5, Carrageenanase 113573-69-6, Xanthan lyase 117277-94-8 138263-79-3, Arabinofuranosidase 142662-05-3, Gamanase 166433-44-9 166433-45-0 220617-91-4, Endo-1,2-β-D-mannosidase
RL: MOA (Modifier or additive use); USES (Uses)
(compns. comprising a saccharide gum degrading enzyme)

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